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UNIVERSITY COLLEGE ANNUAL REPORT 1976-1977

UNIVERSITY COLLEGE
LONDON

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FOREWORD BY THE PROVOST

Last academic year we began to celebrate the one hundred and fiftieth anniversary of our existence. University College was conceived in 1826, built in 1827–28 and opened in 1828; and out of the stormy debates engendered by the foundation of the first liberal university institution in England, where entry was free to both men and women whatever their beliefs, came the University of London. In the academic year in which I write the high spot of the Sesquicentenary was the visit by our Chancellor, Queen Elizabeth the Queen Mother. She had graciously consented to accept Honorary Fellowship of the College; and, after her reply to a speech of welcome by the Provost, she spent the evening, radiant as ever, greeting academic staff and students, administrative and secretarial staff, technicians, beadles and manual staff, as well as some of our Fellows and former students of the College who were present on this occasion.

Last year we laid on the table at a meeting of the Governing Body the original deed by which our founders, who were determined to see a university in London, pledged their financial support for the new venture. The Governing Body recorded their dedication to the principles which had animated the original founders of the College, and the mortal remains of one of these, Mr Jeremy Bentham, were brought into the Council Room. He was recorded as being present but not voting. This year the minutes of the first meeting of the Medical Faculty held on 26 October 1827 were read over a glass of wine at a gathering of members of the Faculty of Medical Sciences of University College and the Academic Board of University College Hospital Medical School. Mr Jeremy Bentham was recorded as again being present but not drinking.

Some relaxation of this kind was in order as University College is suffering the most severe set-back it has received since the war. Everyone knows universities' recurrent grants have been cut in real terms. In September 1976 the University Grants Committee warned universities to expect a cut of 4 per cent. When the Secretary of State announced that they were being cut by only 1 per cent, her statement was greeted with some scepticism, and having planned to sustain the cut which the UGC had originally forecast we awaited the announcement of the grant with a certain degree of confidence that we were prepared for the worst.

The worst was then announced this summer by the Court of the University of London. University College's grant for 1977–78 was neither 1 per cent nor 4 per cent but 7 per cent below the amount required to support our previous level of activity.

But the extent to which we are having to retrench is far worse than even these figures suggest. In 1974 it had become clear to us that the grants we were receiving from the Court were so inadequate that we would run into deficit unless we took action at once. Practically alone among institutions in London we then began to cut staff. Faculties and the administration were asked to cut by 5 per cent in two years. They did so by freezing or by downgrading posts; and unless they had done so the College would have been in deficit in 1976–77.

We had, of course, to do even more to cope with what we expected to be the situation in 1977–78. As a result of all our economies, by the beginning of this academic year the College has in effect abolished 115 posts of all types. Thirty-seven academic posts have gone. In addition 57 posts have been downgraded. Of those 27 were academic posts. We are now in the position where we cannot any longer go on cutting posts through wastage: certain academic posts falling vacant by retirement up to 1983 are already mortgaged. Yet we are still half a million pounds short of balancing our budget.

We shall, with luck, balance it this year. The universities are reported to have considerable balances and, if that were really so, they would be well able to live off these reserves for a year. But only about half represents real reserves; the remainder is held for the maintenance of buildings and other inevitable liabilities. But whereas other universities have a cool million or so as a nest egg, University College has always lived dangerously; and our surplus each year has averaged much less than 1 per cent of our annual expenditure. The Government gives us funds to spend on teaching and research and expects us to spend them. So we do. When we make a surplus we use it to reinforce our academic departments. So the only way we can balance our budget in 1977–78 is to cut our departmental and library grants by £208,000, reduce the provisions for maintenance of premises by £243,000 and take £57,000 from our reserves.

This cannot go on. We ought, in fact, in these days of grossly inflated building costs, to be setting aside half a million a year merely for maintenance of premises. As for the external fabric, our buildings are old and the roofs leak. One roof is costing us nearly £200,000 to replace at the present moment. It is not difficult to produce a plan for repairing our buildings: the difficulty is finding

enough money. Smaller Schools of the University who are quite unable to meet these obligations spend what they can and then appeal to the Court for the balance.

What on earth do we spend our money on? We probably spend too little on putting aside funds to maintain our buildings in years to come. The amount we spend on this, expressed as a percentage of our income, has risen from 5 per cent to only 8 per cent. Then again our administration and central services take only 6·8 per cent of our income. This figure gives a clue to some of our difficulties. It is very small and may account for the austere conditions—some would say squalor—under which we live. True, it represents a higher proportion of our costs than it did at the beginning of the quinquennium, even though we have reduced the number of ancillary staff through wastage. Clerical and secretarial wage awards have disproportionately increased the total bill in this area. So to an even higher degree have the wages of our lowest-paid workers. This is in direct contrast with the costs of academic staff, whose salaries have not increased to the same extent and where the fall in numbers is directly reflected in lower total expenditure.

The area in which we have for years spent more than other comparable institutions is academic staff. We have scrimped and saved on everything in order to keep expenditure on teaching and research in the departments at as high a level as possible. Now that we are having to cut, it is our academic effort that is being continuously diminished. Between 1972–73 and 1976–77 our proportion of expenditure on academic salaries dropped by 6 per cent. Our expenditure on technical and secretarial staff dropped by 9 per cent. On the other hand we deliberately kept up expenditure on departmental grants, which has increased as a proportion of annual income by 8 per cent. Again, embarrassed as our Library is by the staggering rise in costs due to devaluation and inflation, we have increased its expenditure on books and periodicals by 7 per cent from the beginning of the quinquennium. By contrast, the proportion of the grant which other universities spent in this way has been reduced by as much as 10 per cent.

The answer to those who ask why we have had to cut so many posts in the academic departments is, therefore, simple. An institution which spends the bulk of its income in one area will have to trim that area when the going gets rough. Now that academic posts have been cut, it is clear that the next sheep to be shorn are the departmental grants to our scientific and technological departments. In other words research is going to suffer unless departments can go

out and get financial support from outside sources—not all that easy, as already our grants from other bodies total £3,100,000 a year. If University College is to remain a centre of excellence it has got to earn more; every departmental head ought to search for benefactors or enlightened customers. We have got to keep up and increase our income from student fees, which now that they have been revised are a vital form of income; we have to plan far more effectively than we have ever done the directions in which during the rest of this century we want to grow—and, inevitably, the areas we must, however reluctantly, attenuate or phase out—if we are to develop new activities and not stagnate. To achieve this we will have to revise our notions about many things dear to our hearts.

We know well that we must not respond negatively and glumly to our situation. We have in fact taken a major policy decision. Not to stagnate. Though our present plans envisage the abolition, freezing or downgrading of many posts, they also allow for the *creation* of new posts. These new posts are to be in areas of growth and in subjects which are capable of attracting students. Since October 1973 we have created some twenty-five posts.

University College is in fact caught up in a vaster and more intractable problem—the development and financing of the University of London. One of its most expensive activities is medical education; and the cost of this cannot be expected to continue to increase proportionately when it is governmental policy to reduce expenditure on hospitals in London and switch funds to the provinces. Yet anyone who has attended committees on the provision of medical services knows that this is a problem of incredible complexity and that decisions are forced upon the University of London, not by the Department of Education and Science or the UGC, but by the Department of Health and Social Security. Then there are those ventures, whatever their justification in the past, which today have too weak a claim to be supported any longer when posts elsewhere are being abolished and teaching impaired. For instance, substantial savings have been made by closing down or selling off such ventures as the London University Computing Service and Dillon's Bookshop. Then there are academic procedures the cost of which has for long remained unexamined in their totality—one of which is examinations. Then there are such problems as the rationalization of catering facilities and library resources in Bloomsbury, which are being looked into to see whether we can get as good a service as we are now getting but at a smaller cost. What for instance are the real though hidden costs of duplication in the Senate

House of administration in the Schools, and what are the costs of maintaining our present system of democratic participation? These are only some of the problems which the last Vice-Chancellor, Sir Cyril Philips, and the present one, Sir Frank Hartley, who both deserve an honourable place in the history of the University, have been trying, with the aid of the Clerk of the Court, to persuade their colleagues to study in order to establish priorities. The University will have to retrench if the Schools and those Institutes of the University where the students are taught are not to become stunted skeletons of their former selves. But the process of reorganization has scarcely begun and those who engage in it must get accustomed to being regarded as deeply suspect by their colleagues.

The University with its budget now close on £100 million is a bewildering mixture of activities, commitments and institutions—many of them tiny; some bodies are self-governing, others work under Boards of Management which are not always strictly speaking managerial but are designed rather to act as pressure groups when needed; all are ranged against the administration of the Senate House, which, often unjustly, is regarded by other institutions as being a pressure group on its own. Meanwhile further pressure groups this year have made their appearance: namely, the trade unions, and in particular the AUT and NUPE, who have staked their claim to determine what the new Statutes of the University should be—always assuming that the attempt to enact new Statutes is in fact permitted by the unions to succeed. It is impossible as yet to say whether we are standing at the beginning of a long period of civil warfare within the University, such as existed at the beginning of this century and ended only with acceptance of the Hilton Young reforms; or whether financial hardship will create acceptance, however reluctant, of certain changes and amalgamations, on the grounds that if they do not take place and effective savings are not thereby made in total expenditure within the University, a drought will desiccate most of the activities in the place and, for lack of a set of priorities, there will be misery for all.

But there is one principle which will affect all efforts to rephase expenditure and use what we have more effectively. That is the independence of Schools. The Murray Report saw the future of the University in terms of greater centralization and expanded bureaucracy in the Senate House. The University rejected that solution. Rightly: for the number of institutions and activities had grown too large. But our independence depends on the ability of Schools to achieve far greater interdependence in the shape of shared depart-

ments and facilities than has ever happened in the past. If we can learn to do this, the freedom of Schools to use their block grant as they themselves see fit will be able to survive unimpaired.

November 1977 ANNAN, *Provost*

THE REPORT FOR 1976–77

150th Anniversary

It is perhaps unnecessary to point out once again that this College, in its original guise of the University of London, was conceived in 1826, built in 1827–28, and opened in 1828. To mark this Sesquicentenary, by the time this Report appears Her Majesty Queen Elizabeth the Queen Mother, the Chancellor of the University, will have visited the College to be installed as an Honorary Fellow; and we are now actively engaged in planning an exhibition, to be held in May 1978, intended to show to the academic world, to the general public, and to the schools something of our history as the first modern University in England, and something of the extraordinary range and high quality of the work being done here.

The Foundation Oration, in spite of its title, is not contemporary with the College's inception. The Eighty-first Oration, arranged as part of the College's 150th Anniversary Celebrations, was given by The Rt Hon. Sir Harold Wilson, K.G., in the Collegiate Theatre on 14 March 1977. The title of his Oration was 'The Prime Ministers—a 150-year record'. It was preceded by Readings of Poetry and Prose on Universities by Lady Wilson and the Provost.

University College Hospital Medical School

In last year's Report we referred to the decision of University College Hospital Medical School to proceed towards integration with the College, in accordance with the recommendations of the Royal Commission on Medical Education, 1968. In October 1976, following detailed study by working parties with members drawn from UCHMS and the College, the Joint Committee of the College, UCHMS and the Royal Free Hospital School of Medicine presented a 'Report and Recommendations on the Reunification of the College and UCHMS'. The document was given wide circulation within the College and the Medical School, including the Students' Unions, and discussed by a range of committees. Copies were sent to the Trade Union branch chairmen. The 'Report and Recommendations' were accepted by the Professorial Board and by the UCHMS Academic Board, subject to minor amendments, and were endorsed in February 1977 by the College Committee and the Medical School Council. They were accepted also by the Council of the RFHSM. Later in the year, the Senate and Court of the University agreed that reunification

of the College and the Medical School should be effected from August 1978 or as soon as possible thereafter.

When the Medical School joins the College it will form a new Faculty of Clinical Sciences and will be associated with the present (preclinical) Faculty of Medical Sciences as 'The School of Medicine, University College London'. The Students' Union will merge with the College Union and a Clinical Students' Society will be formed.

Pending approval by the Privy Council of the new Charter and Statutes of the College, and of amendments to be made to the Statutes consequent upon the decision to proceed to reunification, representatives of staff and students of the Medical School will be joining committees in the College as assessors in 1977–78. Arrangements have also been made to form a co-ordinating committee between the Academic Board of UCHMS and the Faculty of Medical Sciences.

Finances

The Reports for 1974–75 and 1975–76 both referred to the steps taken by the College to meet the shortfall in recurrent resources. These efforts have enabled the College to live within its budget during the years of retrenchment and, this year, after taking into account supplementary grants amounting to £718,000, we ended with a small surplus of £72,056. This sum, taken together with the uncommitted balances of previous recurrent grants, enables us to carry forward no more than £210,841 at 31 July 1977, as the unappropriated reserve on which we can call in future years. Against an annual expenditure now approaching £20m this may seem small indeed; but it is conscious College policy to aim to spend the income available each year on the purposes for which we exist, namely teaching and research.

The Economy Programmes begun in 1974 have over three years resulted in a reduction of the salaried establishment by 115 posts, with a further 57 down-graded in status, equivalent to nearly 8·5 per cent of staff expenditure. The College has managed to effect these savings without redundancy, by taking advantage of retirements and resignations.

It has been College policy to try to maintain the purchasing power of grants for departmental running expenses and for the general services provided by the College, subject to such reasonable economies as can be made. Particular success has been achieved in reducing fuel, power and water requirements, with savings of up to 25 per cent a year. The College is greatly indebted to all those who

have contributed to such significant reductions, for without them it would have been even more difficult to contemplate a balanced budget.

But in the present year further steps have had to be initiated to meet the situation we were warned to expect in the financial year 1977–78. At the beginning of 1977 the Provost suggested that, on the information then available, the College should have in mind an overall reduction in 1977–78 of 4 per cent of 1976–77 expenditure, approximating to a sum of £550,000 in October 1976 terms. After allowing for contributions towards this target from (i) the levy of Student Union fees as an addition to the new 1977 composition fees (£125,000), (ii) a reduction in departmental grants (£55,000), and (iii) a reduction in maintenance of premises (£50,000), the balance remaining to be met from salaries and wages (about £320,000 on staff in all categories) represented 3·6 per cent of staff costs.

It was therefore decided that for the time being each Faculty and the Administration should be asked to aim at such a reduction, although it was recognised that the incidence of vacancies arising through resignation or retirement would bear more on some departments than on others. It was also recognised that while potential savings figures would be bound to alter as circumstances changed from time to time in individual departments, allowing variation or addition in consequence of casual vacancies occurring in 1977–78, confirmation of the need to achieve a reduction of 3·6 per cent would have to wait announcement of the Court recurrent grant for 1977–78.

After consultation with departments within their Faculties, the Deans in May 1977 presented recommendations for economies in expenditure on staff establishments from 1977–78. The Administration put forward recommendations, including options, for economies in administrative areas on both staff and services. In total these broadly met the 3·6 per cent target, although in some Faculties it had been necessary to express some dependence on casual vacancies, expected to occur mainly in technical and secretarial staff posts. The recommendations, which, as in the case of the earlier phase of economies initiated in 1974, involved no redundancy, were provisionally accepted by the College Committee in July 1977, subject to consultation with the Trade Unions concerned.

Meanwhile, in June, the University Court informed the College what its recurrent grant would be for 1977–78. It was clear that the funds to meet the College's commitments in the next year would be not 4 per cent, but 7 per cent below the College's real need. The

situation of the College is not unique. Although the Secretary of State for Education told the House of Commons that universities' resources would be reduced in 1977–78 by only 1 per cent, universities are finding that the reduction against ongoing commitments at its lowest is about 3–4 per cent and at its highest just under 8 per cent. As soon as we heard about our grant the Provost pointed out to the University that despite the economies made previously by the College amounting to £988,000 a year in 1977 terms, the grant would leave us with a net shortfall of just under £508,000.

We have noted that the Government, through the University Grants Committee, have allowed for an increase in salaries and wages in 1977–78 of no more than 5 per cent, discounting the cost to the College of payment of annual increments to all grades of staff. Each 1 per cent in salary and wage awards costs the College over £74,000 a year. It is said that 12 per cent has been allowed to meet the effect of inflation on non-salary expenditure (such as pensions, heating and departmental maintenance) but the cost to the College will be at least 15 per cent.

The College Committee, meeting early in July, delegated to the Finance Committee a decision on how the £508,000 shortfall should be met by further economies in non-salary expenditure; these will consist partly of postponement of liabilities, partly of actual reductions, and will require a contribution of £57,000 from our reserves.

This in effect can be no more than a palliative to tide us over next session. The University Grants Committee have warned universities that the total grant available for distribution in the year beginning 1 August 1978 will actually fall. We have therefore already started to address ourselves to the prospects and attendant uncertainties of 1978–79.

At the end of 1975–76 the University was advised by the UGC that certain costs relating to catering, other than food and wages, formerly charged to Refectory and Halls of Residence Accounts could in future be met from the general income of the College. However, no compensation by way of additional grant was made to meet this extra burden, the cost of which in 1976–77 amounted to some £12,000 on Refectory Account and £15,000 for the Halls of Residence, where the fees were already well below prices charged in most other university institutions. In spite of these fresh dispensations the Refectory Management Committee still encountered considerable problems in trying to attain financial equilibrium. Although the deficit for 1975–76 (relating to the twelve months ended 31 July 1976) was of the order of £40,000, and that for the

year under review was only £11,400, the Refectory Management Committee, while rightly to be complimented greatly upon its efforts, has been told by the College that further subsidisation in 1977–78 cannot be contemplated. As for the Student Accommodation Account, this has, largely as a result of the splendid enterprise of Wardens and other staff, been maintained in a healthy state by large income from vacation lettings, part of which has subsidised term-time fees with the remainder going to the General Reserve from which future acquisition of property may be financed.

In 1976–77 the College changed the method by which the Students' Union was financed. Instead of the Union receiving a block grant from the College, it received a *per capita* grant of £18 per full-time student, with reduced amounts for part-time students and other categories. These capitation fees were met from within the composition fee levied by the College for tuition, etc., and therefore did not relieve the College of any financial burden (in 1977–78 the Union fee will be levied *in addition* to the composition fee).

The income of the College for 1976–77 amounted to £18,730,917, an increase of £1,866,567 over 1975–76. Expenditure in 1976–77 was £18,658,861 inclusive of the cost of research borne by outside grants which total £3,132,052 compared with £2,955,854 in 1975–76. The number of these grants was 525. Capital grants announced for the year amounted to £78,991 compared with £102,268 for the previous year. Receipts against these and previous capital grants and capital expenditure amounted to £86,643 compared with £361,910 in 1975–76.

College Sites and Buildings

The outlook for major capital projects appears to be bleak, in view of the derisory sum available to the University Grants Committee for university building in the country as a whole, although there are signs that some improvement may be possible within the next few years. Just now, however, the College's longer-term plans for the redevelopment of the Rectangle appear almost to be in a state of limbo, although the first phase of these plans, the decanting building at Bedford Way, is still going ahead. The structure has now reached the second floor level, with the contractors' two tower cranes very evident on the skyline, and if progress can be kept up, the building should be ready for commissioning for the Departments of Psychology and Geography in July 1978. But in view of the uncertainty about our redevelopment plans, it is too early to say

what will happen to the space which they will vacate in the Rectangle.

There is one piece of especially good news. Work has now been started on site on the new student residential block at 111–117 Camden Road, which will house 91 students and will be used as an annexe to Ifor Evans Hall. The cost of the building is being met from a substantial benefaction from the Anonymous Donor, who has even more generously increased his benefaction, largely to cover the cost of a new Clubroom on the site. This Clubroom will serve the whole of the residential complex in the Whitcher Place area, including Ifor Evans Hall and Max Rayne House, and is sure to provide a popular meeting place for the 600 or so residents.

Although there is a shortage of funds for major capital buildings, the College has had to carry out a number of substantial maintenance jobs, including the re-roofing of the Civil Engineering block on the Gower Street frontage, which is now under way, a number of improvements to the Boiler House, and the replacement of underground heating services which have now reached the end of their useful life. This type of work will be a major problem in the College in the next few years, as the various service installations put in just after the war begin to wear out, at a time when the College, along with other public bodies, is most severely hit by inflation and shortage of recurrent funds.

Very limited funds have been available for small improvement jobs, but perhaps one could single out a complicated small laboratory conversion which has been completed in the Department of Biochemistry for research with carcinogens. There have also been alterations to the Pavilion at the Shenley Athletic Ground, to provide a new Clubroom and Bar as well as other improvements. This work is being paid for by UCHMS, whose teams are now sharing the ground at Shenley.

Staffing Matters

The College's relations with its staff unions continue to figure prominently in our activities. A procedure agreement was drawn up with the local branch of ASTMS, in respect of the College's technical staff, and a Joint Committee established. The agreement with NUPE was amended in the light of the experience gained in its first year of operation, but has since run into difficulties, and has been terminated by the Union. A Working Party on Trade Union Representation on College Standing Committees was set up by the Committee on College Governance to consider requests from the Unions for such membership, and has taken evidence from the

College's five recognised trade unions. Its report is expected in the Autumn of 1977.

Further experience of the outside training facilities available for probationary lecturers led the Appointments and Promotion Committee to the conclusion that the College ought to attempt to organise its own training. The Sub-Committee on the Training of Teachers therefore prepared a training programme, which commenced in September 1977.

Agreement has been reached with the unions concerned on the organisation of induction courses for new clerical and technical staff.

Student Numbers

During the session 5,928 students registered at the College, an increase of 164 over the previous session. The number of full-time students increased by 221 to 5,224, 3,808 of whom were undergraduates. 1,374 of these undergraduates were admitted for the first time to first degree courses, an increase of 71. The total postgraduate population of 1,866 remains virtually unchanged, but the number of part-time postgraduates, the majority of whom are carrying out research for the M.Phil. or Ph.D. Degree, fell by 22 to 450. 52 per cent of the 1,416 full-time postgraduates were following taught courses.

The College continues to attract about 20 per cent of its students from many overseas countries. 423 students normally resident in 27 Commonwealth countries and 740 students from 70 other overseas countries registered during the session. 700 of these students from abroad were postgraduates.

42 per cent of the full-time undergraduates in attendance at the College this session lived in halls of residence or other accommodation provided by the College or the University and 22 per cent lived at home; the remainder were in lodgings or flats.

Careers Service

The College Careers Office moved into new accommodation in the Bartlett Building in the summer of 1976. This move enabled a large open-plan Information Room to be provided, flexible enough to adapt to changing requirements for many years. Despite the continuing economic recession and the relatively high total of unemployed, the College Careers Service had slightly fewer problems in helping graduates in 1976 than in 1975. This was partly because the students showed a more flexible attitude and a more organised

approach to the employment situation. A very necessary change has been taking place in job expectations, and there is now no such thing as a 'graduate job'. Our students are moving into all sorts of career areas which were previously the preserve of the school leaver—banking, insurance, accountancy, laboratory technicians being some examples. Of the first degree students who graduated in July 1976, just under half went immediately to permanent employment in the UK; 18 per cent went on to higher degrees, 20 per cent to full-time vocational study (including 8 per cent on teacher training), and 5 per cent went abroad. About 7 per cent were recorded as unemployed at the end of the year.

Academic Matters

Only two new courses were introduced in the session, both at undergraduate level, the B.A. in Linguistics and the B.Sc. in Computer Science with Electronic Engineering.

During the session the College Committee and the Wellcome Trustees approved a scheme for a closer association between the Wellcome Institute for the History of Medicine and the College. The Wellcome Trustees have for some years provided financial support for the College's History of Medicine Unit, within the Department of Anatomy and Embryology, and the scheme will bring about a closer working relationship between the Unit and the Institute, to the benefit of both. The objects of the scheme are to promote the study of the history of medicine, to provide academic recognition for the academic staff of the Institute, and to make provision for the necessary supervision of postgraduate students working in the Institute such that they may be registered as Internal Students of the University. The College will have the facilities of the Institute's unrivalled library in the subject.

The IBM 360/65 computer installed in the Computer Centre has continued to provide a service for members of the College and other Schools, as part of the overall facilities available to the University. The use of the terminal system has expanded considerably during the year, an expansion which has taken place in spite of a frustrating shortage of terminals. The University network, Metronet, has been in operation for the whole year, for the first time giving users everywhere equal access to all the main systems. Much thought has been given to the eventual replacement of the 360/65, which has now been in use for more than ten years, and an attractive proposal was put to the Computer Board for Universities and Research Councils for a system of distributed mini-computers. At the end of

the year we were informed of the approval of the first stage of this installation.

In September 1976 the Audio Visual Unit vacated the temporary accommodation which had been in use since the Unit was established in 1972 and moved to a permanent location in the basement of the Bartlett Building. The new accommodation includes a studio for sound recording and television productions, two control rooms, storerooms, workshop and office. The studio is well insulated from traffic and aircraft noise and is provided with a 25 kW lighting installation and a separate ventilation plant. During the session the studio has been brought gradually into use and has proved invaluable not only for making sound and television recordings but also for viewing television programmes, films and 'multi-media' presentations produced by the Slade School. The demand for the Unit's services has continued to grow: during the year facilities were provided to thirty-six departments or units within the College and some fifteen outside organisations using College premises.

The names of two College departments have been changed. At the end of the first term the Department of Chemical Engineering became the Department of Chemical and Biochemical Engineering, and from the beginning of 1977–78 the School of Environmental Studies became the Bartlett School of Architecture and Planning. The changes were made in order the better to represent the scope of the research and teaching of the two departments, and, in the latter case, to revive in the title of the School the name of Sir Herbert Bartlett, under whose benefaction in 1911 the School of Architecture had been erected.

The centenary of the institution in the College of the Barlow Lectures on Dante was marked by a special lecture 'Dante and the Roman World' delivered on 1 June 1977 by Professor J. H. Whitfield, and by an exhibition *Dante at University College London* which was arranged by members of the Department of Italian in the Flaxman Gallery of the Library (30 May to 1 July). This drew on books, notebooks, sketches, correspondence and other documents to illustrate aspects of Barlow's life and work, the history of the lectureship and the resources of the Dante Collection. It was in November 1876 that the Dante scholar Henry Clark Barlow died, leaving the College his Dante library, his papers relating to Dante and Italy, and an endowment for the delivery of free public lectures on the *Divine Comedy*.

The Department of Classics at Stanford University has established,

with the aid of a legacy, a memorial fund in honour of T. B. L. Webster, who was Professor of Classics there from 1968, when he retired after twenty years in the Chair of Greek at University College, until his death in 1974. The fund will, among other purposes, endow a visiting professorship. The visitor is to be invited for two to three weeks, during which he will give a public lecture and three or four research seminars. The special hope is to strengthen links between Stanford and London in the field of Classical Studies. Professor E. W. Handley was invited to visit Stanford during the third term to inaugurate the scheme.

The following public lectures were among those arranged by the College during the session: Barlow Lecture on Dante by Professor J. H. Whitfield on 'Dante and the Roman World'; Commonwealth Fund Lecture by Professor A. S. Link (Princeton) on 'The Cobb Interview: Woodrow Wilson and the agony of war'; Feldberg Foundation Lecture by Professor Ernst Habermann (Giessen) on 'Tetanus toxin and other centrally acting neurotoxins, as challengers and as tools'; Freud Memorial Lectures in Psychoanalysis by (i) Professor W. H. Gillespie on 'The Legacy of Sigmund Freud', 'Freud and Science', 'Freud and Culture', 'Symbolism and Language', 'Freud and Sexuality', 'Psychic Structure and Structuralism', 'Some Controversial Issues, including the Death Instinct' (seven lectures), and (ii) Professor Richard Sennett (New York) on 'Crises of Authority'; Rickman Godlee Lecture by Professor H. R. Trevor-Roper (Oxford) on 'The Union of England and Scotland'; Mildner Lecture by Professor F. E. Jones on 'Infra-red Detectors and their Applications'; Neale Lecture in English History by Mr Keith Thomas (Oxford) on 'The Place of Laughter in Tudor and Stuart England'; Lord Northcliffe Lectures by Professor Arnaldo Momigliano on 'Between Synagogue and Apocalypse: Aspects of Hellenistic Judaism' (four lectures); Smith, Kline and French Laboratories Lecture in the Allied Health Sciences by Professor H. Thoenen (Basle) on 'Transfer of Information from Effector Organs to Innervating Neurons'; William Townsend Memorial Lecture by Professor Sir Leslie Martin on 'Aspects of Art and Architecture: Forty years in retrospect'. Inaugural lectures were given by Professor G. Burnstock (Anatomy) on 'Chance, Intuition and Reason in the Discovery of Nerves'; Professor W. E. Butler (Comparative Law) on 'International Law and the Comparative Method'; Professor J. L. Jowell (Public Law) on 'The Limits of Law in Urban Planning'; and Professor A. D. G. Smart (Urban Planning) on 'Of Cities and Plans'.

A list of publications of members of the College departments will be found on pp. 36–103. This is an impressive record and though no attempt is made here to summarise the research projects on which the departments have been engaged during the session, many of them have attracted substantial grants from Research Councils and other grant-giving bodies, which are gratefully acknowledged in Appendix VI.

Towards the end of April the College held its eleventh annual Schools Conference, which was attended by some seventy-five guests, including many Heads and Principals, from a wide cross-section of Schools and Colleges in England and Wales. The main business of the Conference consisted of talks and discussions on the six Faculties, and visits by small groups to individual academic departments. There were also talks on the range of student welfare services provided centrally in the College, and on the library facilities available to students both in the College and in the Bloomsbury area. An innovation was to include, among the informal evening proceedings in Ramsay Hall, a talk to illustrate the quality of research within the College, on which the tuition of our students is based. This year's talk, given by Professor Randolph Quirk on the Survey of English Usage, was an outstanding success. The Conference proved to be once again a most enjoyable and worth while occasion.

College Collections

Necessary conservation and restoration work on prints, drawings, watercolours and other works of importance, and on the Egyptology Collection, has continued, with support at the by now customary level from the Finance Committee. At least five years' work still lies ahead.

The need for better accommodation for the Collections was underlined by further damage done to some of its material when heavy rain again leaked through the roof of the Flaxman Terrace premises. Fortunately, one can report a decision of the Planning and Buildings Committee to convert, for the use of the College Collections, the Old Refectory Annexe, no longer used as such, provided that the cost of adaptation, beyond what the College can afford, can be met from outside sources. The intention is to provide secure storage and adequate work-space for the Curator, together with modest facilities for serious students. Gallery space is not contemplated, but the location of the new room will facilitate rapid and frequent changes of the display in the Cloisters.

Our congratulations are due to our Curator, Mrs Mary Lightbown, on the outstanding success of the exhibition of the works of Zoffany which she organised, and which was held earlier in the year at the Carlton House Terrace premises of the National Portrait Gallery. The exhibition received the most enthusiastic notices in the Press, and Mrs Lightbown's catalogue represented a major contribution to the history of XVIIIth Century painting in this country.

Association of Friends of University College London

During 1976–77 the Friends of University College authorised grants totalling £9,580 in support of the following projects: publication of two volumes of the works of Jeremy Bentham, now ready for publication (two payments of £2,500 spread over two years); travel expenses of two representatives of the Debating Society to enable them to take part in an International Debating Competition in Canada (£200); Rugby Club's reciprocal entertainment of a French team on their visit to London (£30); production of a report on the Kith and Kids project undertaken in conjunction with CAre (up to £100); purchase of new carbon fibre blades and riggers for the University College and Hospital Boat Club (£400); enlarging the Day Nursery premises by an extension into the ground floor of 20 Taviton Street (£500); showcase for Department of Chemistry for items of historical interest (£450); provision of pictures for Ramsay Hall dining room (£100); Film Society's production of newsreels of archive interest (£200); purchase of additional seats and flower tubs, to be associated particularly with the 150th Anniversary (£100); 150th Anniversary Exhibition (£2,500—up to £1,500 for the purchase of permanent material and the balance towards general expenses).

By such grants the Friends have been able to provide those things which improve and enhance life in College for staff and students. If they are to continue their important role in the life of the College, the Friends need to increase their membership numbers and their income from subscriptions and donations.

SUPPLEMENT

HONOURS AND DISTINCTIONS

In the New Year Honours in 1977 two Fellows of the College were created Knights Bachelor: Dr F. Hartley, Vice-Chancellor of the University of London and Dean of the School of Pharmacy, for services to pharmacy, and D. E. Rooke, Chairman of the British Gas Corporation. The C.M.G. was conferred on Dr L. G. Goodwin, Director of Science, Zoological Society of London, a former student in the Faculty of Medical Sciences, for services to the study of tropical diseases; and the C.B.E. on J. W. C. Darbourne, architect, Patrick Heron, painter, both former students in the Faculty of Arts, and Dr T. D. Whittet, Chief Pharmacist at the Department of Health and Social Security, a former student in the Faculty of Medical Sciences.

In the Queen's Silver Jubilee and Birthday Honours, the following former students in the Faculty of Arts were honoured: P. K. Archer, Member of Parliament for Warley West, was appointed a Privy Councillor, Dr Frances A. Yates, formerly Reader in the History of the Renaissance at the Warburg Institute, was created a D.B.E. for services to Renaissance studies, and the C.B.E. was conferred on Frank Dunlop, Director of the Young Vic Company, R. W. McDowall, Secretary of the Royal Commission on Historical Monuments (England), and E. G. Sibert, County Planning Officer with the Surrey County Council.

The following were elected Fellows of the College in 1977: Major-General Sir Leonard Atkinson, K.B.E., Chairman of the Department of Industry Committee on Terotechnology and of the Council of Engineering Institutions, and formerly Director of Electrical and Mechanical Engineering, Army; Bernard Melchior Feilden, C.B.E., F.R.I.B.A., Architect, Director of the International Centre for the Study of the Preservation and Restoration of Cultural Property in Rome; Henry Charles Herbert Graves, O.B.E., Chairman of various companies concerned in marketing of cereals and animal foodstuffs, Trustee and formerly Treasurer of the Friends of University College London; Sir John Capel Hanbury, Kt, C.B.E., member of Council of School of Pharmacy, formerly Chairman of Allen and Hanburys Limited; Mrs Carol Margaret Handley (*née* Taylor), Headmistress, Camden School for Girls; Professor Harry Geoffrey Hopkins, F.I.M.A., Professor of Mathematics and Head of the Department of Mathematics, University of Manchester Institute of Science and Technology; Professor Allan Maccoll, F.R.I.C., Professor of Chemistry, University College London; William Robert Merrington, F.R.C.S., Lecturer in Surgical Pathology and Curator of Morbid Anatomy Museum, University College Hospital Medical School; Robert Barron Kerr Stevenson, C.B.E., F.S.A., F.M.A., Keeper, National Museum of Antiquities of Scotland; Dr Arthur William Charles Taylor, F.R.I.C., F.I.P., formerly Chairman, Petrochemicals Division, Imperial Chemical Industries Limited.

Among the interesting and important appointments announced during the session were those of B. M. Feilden, Fellow of the College, as Director of the International Centre for the Study of the Preservation and the Restoration of Cultural Property in Rome, T. Stöverud as Cultural Attaché to the Norwegian Embassy on a two-year secondment, and Professor B. C. Vickery as a member of the Steering Group on Library Research set up by the University Grants Committee. Sir Arthur Vick, a former member of the staff of the Department of Physics, was appointed Chairman of the Council of the University of Warwick.

Sir Angus Paton and Professor M. G. P. Stoker were appointed and Emeritus Professor Sir Harrie Massey re-appointed Vice-Presidents of the Royal Society. Professor E. A. Ash and Professor A. L. Cullen were elected to Fellowships of the Society, and former staff and students similarly honoured were Dr A. C. Bangham, Professor P. O. Bishop, Professor R. J. Gillespie and Professor J. Maynard Smith. Professor I. R. Christie and Professor J. R. Hale became Fellows of the British Academy. Professor R. E. D. Bishop and Professor A. L. Cullen were elected to the Fellowship of Engineering, and Professor Cullen was also elected to the Board of Managers of the Royal Institution. Professor E. H. Brown was appointed Honorary Secretary of the Royal Geographical Society and elected President of the Institute of British Geographers, J. A. Graham-Campbell was elected a Fellow of the Society of Antiquaries of London, Dr J. Lewins was appointed President of the Institution of Nuclear Engineers, and Emeritus Professor J. Z. Young was elected President of the Marine Biological Association of the United Kingdom. Professor E. R. Dobbs, a former Physics student, was elected President of the Institute of Acoustics and Honorary Secretary of the Institute of Physics, and Professor Akin Mabogunje, a former Geography student, was elected Vice-President of the International Geographical Union.

Sir Frank Young was elected an Honorary Fellow of Darwin College, Cambridge, Professor H. Harris a Foreign Associate of the National Academy of Sciences, U.S.A., and Professor E. G. Turner a Foreign Member of the Sächsische Akademie der Wissenschaften, Leipzig, and of the American Philosophical Society in Philadelphia. Professor P. G. Foote was appointed a Knight First Class of the Order of the Dannebrog, and Professor W. R. Mead a Commander of the Order of the White Rose of Finland; Professor Foote and Professor Mead were both appointed Commanders of the Royal Swedish Order of the North Star.

Honorary degrees were conferred on members of the College as follows: the Docteur *honoris causa* of the University of Paris on Professor H. Harris, the D.Sc. of the University of Aston in Birmingham on Professor Sir Andrew Huxley, the D.Univ. of Brunel University on Emeritus Professor G. W. Keeton, the D.Litt. of the University of Rhodesia on Sir Douglas Logan, the D.Sc. of the University of Newcastle upon Tyne on E. G. M'Ewen, the Doctor of Humane Letters of the University of Chicago and of Brandeis University and the Doctor Litterarum of the

University of Leiden on Emeritus Professor A. D. Momigliano, and the D.Litt. of Loughborough University of Technology on D. T. Richnell. The Council for National Academic Awards conferred the honorary degree of D.Ed. on Emeritus Professor F. R. Winton. Honorary degrees conferred on former members of the College included the D.Litt. of the New University of Ulster, Coleraine, on Professor H. C. Darby, and the D.Lit. of the University of London and the D.Univ. of the University of Essex on Emeritus Professor Sir Ernst Gombrich.

K. B. Atkinson was awarded the President's Medal of the Photogrammetric Society, J. A. Graham-Campbell the Chalmers-Jervise Prize for 1976 by the Society of Antiquaries of Scotland, Dr M. D. Lilly the 1976 annual award of the Food, Pharmaceutical and Bioengineering Division of the American Institute of Chemical Engineers, and Professor C. A. Rogers the De Morgan Medal of the London Mathematical Society. Dr S. A. Fender was awarded a Huntingdon Library Fellowship for study in the U.S.A. L. A. Creedy, a former Geography student, was awarded the Grand Medal of Ghana in recognition of his services to education.

APPOINTMENTS

At the beginning of the session Sir Arthur Snelling was appointed a member of the College Committee, on the nomination of the Fellows, in succession to Sir Edwin Chapman-Andrews, and Mr S. R. Burley and Mr W. Foy were appointed to the Investments Committee.

Dr R. E. Allsop, formerly Director of the Transport Operations Research Group, Department of Civil Engineering, University of Newcastle upon Tyne, was appointed to the Chair of Transport Studies, Professor A. B. Atkinson, formerly Professor of Economics in the University of Essex, came to the Chair of Political Economy and the Headship of the Department, Dr F. G. B. Millar, formerly Fellow of The Queen's College, Oxford, was appointed to the Chair of Ancient History, and Professor A. J. Strathern, formerly Professor of Social Anthropology in the University of Papua, New Guinea, came to the Chair of Anthropology and the Headship of the Department. In the Department of German, Professor J. P. Stern, Head of Department, was transferred to the Established Chair of German vacated by Professor Elizabeth M. Wilkinson, and Dr M. W. Swales, formerly Reader in German at King's College, London, was appointed to a single-tenure Chair of German. Professor P. G. Foote again became sole Head of the Department of Scandinavian Studies, on the resignation of Professor D. M. Wilson, with whom since 1974 he had been Joint Head.

Members of staff who became Professors by conferment of title at the beginning of the session were Dr W. E. Butler (Comparative Law), Dr P. Fatt (Biophysics), J. D. O'Connor (Phonetics), and Dr Valerie Pearl (History of London). The title of Professor of Pharmacology was conferred on Professor J. W. Black, Head of the Department of Pharmacology, for the period 1 July to 31 December 1977; he had resigned from

the Chair of Pharmacology on 30 June 1977 in order to take up an appointment with the Wellcome Foundation Limited under arrangements which provided for his secondment to the College for the six-month period. In August 1977 the title of Professor of Naval Architecture was conferred on Dr R. K. Burcher, of the Royal Corps of Naval Constructors, who had joined the Department of Mechanical Engineering in succession to Professor K. J. Rawson under the scheme of collaboration between the Corps and the Department for the development of teaching and research in Ocean Engineering.

The title of Reader was conferred on Dr M. Coffey (Greek and Latin), Dr J. L. Culhane (Physics), Dr B. G. Duff (Physics), Patrick George (Fine Art), M. R. Harris (Electrical Engineering), Malcolm Hughes (Fine Art), Dr A. R. Lieberman (Anatomy), and Dr J. A. Sutherland (English).

The following Visiting Professors were appointed during the session: Dr R. M. Davies, Biomechanical Research and Development Unit, Roehampton (Mechanical Engineering); Dr D. E. C. Eversley, Centre for Environmental Studies (Environmental Studies); G. H. Gellie, University of Melbourne (Greek); Dr William Gillespie, formerly President of the British Psychoanalytical Society and of the International Psychoanalytical Association (Freud Memorial Visiting Professor of Psychoanalysis); Professor H. Harris, University of Pennsylvania (Biochemistry); Dr Howard J. Rogers, National Institute for Medical Research (Botany and Microbiology); Peter D. Smithson, Banister-Fletcher Lecturer (Environmental Studies); and Professor Gun Widmark, University of Uppsala (Scandinavian Studies).

In the School of Environmental Studies J. Andrews became Director of Building Industry Studies and Dr K. C. Rosser Director of the Development Planning Unit. Other College appointments included those of R. B. Inglis as Warden of Max Rayne House, in succession to D. J. Galligan, and D. V. Bowles, formerly Senior Assistant Accountant, as Deputy Accountant.

There were a number of changes in College Faculty appointments: Professor J. E. C. T. White, Professor C. A. Rogers, and Professor P. D. Cowan became respectively Deans of the Faculties of Arts, Science, and Environmental Studies; and Professor J. L. Jowell, Professor C. A. Vernon, Professor T. H. Lambert, and Professor N. F. Watson became respectively Vice-Deans of the Faculties of Laws, Science, Engineering, and Environmental Studies; Professor D. M. Wilson became Vice-Dean of the Faculty of Arts, and on his resignation on 31 December 1976 he was succeeded by Professor W. R. Mead.

In the University of London, Lord Annan was appointed Chairman of the Collegiate Council for 1977–78.

During the year announcement was made of the following appointments of members of the College to academic posts outside the College: Dr J. A. Barnard as Newton-Drew Professor of Chemical Engineering and Fuel Technology in the University of Sheffield, Dr Lorna A. Casselton as

Reader in Genetics at Queen Mary College, London, Dr C. J. Holdsworth as Professor of History in the University of Exeter, Dr V. Karageorghis as Visiting Research Fellow, Merton College, Oxford, Emeritus Professor A. D. Momigliano as Grinfield Lecturer on the Septuagint at the University of Oxford, Dr A. J. Smith to the Chair of Geology at Bedford College, London, and Dr D. Skevington as Professor of Geology in the Memorial University of Newfoundland. The University of London conferred the title of Professor of Physiology on Dr M. W. B. Bradbury in respect of his post at King's College, London; and the Royal Institution conferred the title of Professor of Experimental Medicine on Sir Peter Medawar.

Appointments of the following former members of the academic staff to academic posts outside the College were also announced: Professor T. J. Chandler as Master of Birkbeck College, London, Professor P. A. Jewell as Professor of Reproductive Physiology in the University of Cambridge, and Professor F. M. L. Thompson as Director of the Institute of Historical Research.

RETIREMENTS

Professor R. G. Hopkinson retired from the Haden-Pilkington Chair of Environmental Design and Engineering, of which he was the first holder, in December 1976. He came to the College in 1965 from the Building Research Station, where as Senior Principal Scientific Officer he had been Head of the Lighting Section and before that had made significant contributions to the technology of exterior lighting and radar. His work at the BRS was concentrated on human responses to buildings, and this led to an original and fruitful concept of research into environmental design by engineers, physicists and architects in collaboration, in particular on the design of schools with the Ministry of Education Development Group and on hospitals with the Nuffield Foundation Unit for Architectural Studies. In the education of architects his influence was considerable, particularly in the 1960s and early 1970s, when he brought a scientific rigour to their approach to design. He became President of the Illuminating Engineering Society in 1965–66, was awarded the Society's Gold Medal in 1972, and was elected an honorary Fellow of the Royal Institute of British Architects in 1969. His many books and papers were in the main concerned with lighting and vision, in which subjects he was an acknowledged international authority, but more recently his interest moved towards the problems of environmental evaluation. He was a member of a number of College committees and for two years served as Dean of the Faculty of Environmental Studies.

With the early retirement of Professor D. V. Lindley from the Chair of Statistics the College loses an internationally leading apologist of the neo-Bayesian reformulation of the foundations of Statistics. He was appointed to the Chair and the Headship of the Department of Statistics in 1967, and in the early 1970s was concerned with a major expansion of

the Department when it took in Computer Science and became the Department of Statistics and Computer Science. His first work in Statistics was with the Ministry of Supply and the National Physical Laboratory, between 1943 and 1948. He then spent twelve years at the Statistical Laboratory in Cambridge, ending as its Director. During this period appeared the distinctively orange 'Lindley and Miller Statistical Tables' by which he is known to tens of thousands of examination candidates. However, the first fruits of his tradition-breaking re-thinking of Statistics were published in 1965 as the two-volume *Introduction to Probability and Statistics* (*from a Bayesian Viewpoint*), when he was Head of the Department of Statistics at Aberystwyth. His inaugural lecture at University College in 1968 will be remembered for its renewed demand for radical change in the theory and practice of Statistics. The years since 1968 have seen his most influential work, including the books *Making Decisions* and *Bayesian Statistics: A Review*; one of his papers bears the title 'The Future of Statistics—a Bayesian 21st Century'. Consistently, he was the key mover in the restoration of Bayes's tomb in Bunhill Fields Cemetery. Professor Lindley served on a number of College committees, and gave valuable advice and guidance on the provision and presentation of statistics for the use of our resources committees.

With the retirement of Professor V. P. Underwood from his Professorship of French, a real loss will be felt by his colleagues. He has been a colourful member of the Department. He graduated at the College in 1930 and obtained his Ph.D. here in 1937; in addition he took a *Licence ès Lettres* in 1935 and was awarded a *Doctorat ès Lettres* in 1950. From 1937 to 1939 he was an Assistant in the Department of French, and then moved on to Manchester as an Assistant Lecturer and later to the University of Durham (at Newcastle) as a Lecturer. In 1953 he returned to UCL as a Temporary Lecturer, and the title of Reader was conferred on him in 1957 and that of Professor in 1970. His work covers a wide range of interests, from medieval to modern times, and it will surprise many of his students to know that his Ph.D. was devoted to the study of an Anglo-Norman chronicle. In more recent years, he has been known above all for his work on the French poets of the 19th century, especially Verlaine and Rimbaud, and he is widely regarded as an authority on the many links binding Verlaine and Rimbaud to England. Professor Underwood's students, whilst fully aware of his scholarly credentials, appreciated even more his ability to make complex subjects easy and to arouse their enthusiasm. His sensitivity to the nuances of both the English and the French languages is unusual and has always formed an important part of his language teaching.

Professor G. L. Watson retired from the Department of Mathematics at the end of the session. He retired in 1946 from his first career in the Indian Civil Service, and then taught at Acton Technical College until he joined the College as a Lecturer in 1955. The title of Reader was conferred on him in 1961 and that of Professor of Mathematics in 1970. He made a

name for himself as a mathematician, while at Acton, by his ingenious 'elementary' proof that every sufficiently large integer is the sum of seven positive cubes, and his work is mainly on the arithmetical theory of quadratic and cubic forms. His book on quadratic forms presents a simplified and unified treatment of a subject that had, over a period of a hundred years, developed in an almost chaotic fashion. Professor Watson was Honorary Librarian and then Vice-President of the London Mathematical Society, and was awarded the Society's Berwick Prize in 1968 for his research work. He continues as an Honorary Research Fellow in the Department.

B. C. Brookes retired from his Readership in Information Studies in the School of Library, Archive and Information Studies, which he has held since 1966. He came to the College in 1946, when he joined the Department of Electrical Engineering as Lecturer—later becoming Senior Lecturer—in the presentation of technical information, probably the first appointment of its kind in the country. He was the first editor of the College *Bulletin*, from 1967 to 1969, and did much to make it a genuine organ of communication within the College. In 1951 he was author, with W. F. L. Dick, of a very successful *Introduction to Statistical Method.* During the last ten years he has published many papers applying mathematics and statistics to problems encountered in information transfer, and in 1975 he organised at the College a very successful international research forum in information science. At this moment of retiring a new flow of publications on the theoretical foundations of information science is coming from his pen. The School will sorely miss him, but looks forward to continued contact with his contributions to knowledge.

T. D. Goddard retired from his Senior Lectureship in the School of Environmental Studies at the end of the session after seventeen years' service. He was a student of the Architectural Association School of Architecture, where he later became Vice-Principal, and spent a period in full-time private practice before his appointment in the College. He is perhaps best known for his inspiring teaching of architectural and landscape design, which he entered into with enormous zest and flair, but he was also for several years an active member of College committees concerned with building development. He became a strong advocate for the improvement of the main quadrangle of the College, and he prepared an imaginative design for this some years ago, but economic conditions have not permitted its realisation. He was a lively colleague whose enthusiasm for the subject of architecture was infectious, and he will always be remembered happily by generations of students.

Dr Phyllis M. Kaberry retired after twenty-eight years in the Department of Anthropology, twenty-six of these as Reader. After completing her B.A. and M.A. with First Class Honours in Anthropology at the University of Sydney, she came to London where she took her Ph.D. in 1939 and worked as a research assistant under Professor Malinowski at the London School of Economics. Since joining the Department in 1949,

Dr Kaberry's teaching and administrative work have been marked by her great personal interest in her students. In her research, she is one of the few anthropologists to have carried out lengthy periods of fieldwork in three different parts of the world: N.W. Australia (1934 and 1935–36), the Sepik area of New Guinea (1939–40), and British Cameroons (1945–46, 1947–48, 1958, 1960, and 1963). In 1957 Dr Kaberry received the Rivers Medal from the Royal Anthropological Institute in recognition of her outstanding field research, and in 1960 she was awarded (with E. M. Chilver) the Institute's Wellcome Medal for Applied Anthropology. The results of her research have appeared in numerous publications, including *Aboriginal Women* (1939) and *Women of the Grassfields* (1952). [Shortly before this Report went to press the College heard with deep regret of the death of Dr Kaberry on 30 October 1977.]

J. H. Kells's retirement from his Readership in Greek and Latin falls on the 40th anniversary of his joining the College. He came as an Assistant Lecturer in 1937 after studying at Queen's University, Belfast, and St John's College, Cambridge, and the title of Reader was conferred on him in 1962; from 1977 he will go on working here as an Honorary Research Fellow on an edition of Sophocles which he is completing; and the *Electra*, edited with a commentary in 1973, gives an idea of the range of literary scholarship which is being brought to bear. What this work does not do (and nothing easily could) is to show the benefit that has accrued to colleagues and pupils—now in all parts of the world—from the learning and friendship of a quiet, tough, thoroughly sympathetic character with an Irish sense of humour. Jack has seen it all, both before the war and when he returned as an experienced Wireless Mechanic from Somewhere in India. He has had his years as Departmental Tutor, he has played Mercurial cricket and Apolline piano music for the Common Room in its different moods; and at a short remove in time he ran a senior seminar at the Institute of Classical Studies and took the part of Joxer Daly in *Juno and the Paycock* for DramSoc. It is good that he wants to go on seeing it all (or some of it) and that his many friends can go on seeing him.

Sydney M. Cockerell joined the staff of the School of Librarianship, part-time, in 1946 and has helped continuously, first as Demonstrator in Bookbinding and later as Lecturer, until the end of this session. A world authority on all aspects of paper-making, bookbinding and the repair of paper and books, he made a valuable contribution to the work of the School for over thirty years. In addition to his teaching work, he has always generously placed himself at the disposal of the Librarian and other colleagues for advice on difficult problems of book preservation. He will be respectfully remembered by the many students who had the good fortune to be exposed to his artistry and knowledge.

On the administrative staff, K. R. Benda, Finance Clerk in the Bursar's Department, retired after twenty-eight years' service with the College.

RESIGNATIONS

Sir Edward Playfair, Honorary Fellow of the College, retired from membership of the College Committee at the end of the session. He joined the Committee in 1961 and has been its Vice-Chairman since 1971. His interests have ranged widely over College affairs, and his membership of committees has included those concerned with allocation of resources, long-term planning, finance, pensions, the College art collections, the Slade School, and the election of Fellows of the College. During 1965–66 Sir Edward generously carried out a survey of the College administration, with the purpose of identifying the main problems and suggesting how they might be tackled; his report and recommendations have been instrumental in bringing about many beneficial changes in our administrative organisation and our committee structure and procedures. In the preparation of our new Charter and Statutes, he has never failed to offer helpful advice and constructive criticism at each of the many drafting stages. Sir Edward's wise counsel, his acuteness of mind, his grasp of principle, his attention to important detail, and his kindly understanding of the problems of staff and students have been invaluable to the College. He will be greatly missed.

The College Committee also lost the services of Mr P. W. Heath, a most loyal, kindly and helpful former student, who had been a member since 1972 on the nomination of the Old Students' Association of the College.

Professor K. J. Rawson, the second Professor of Naval Architecture to join the Department of Mechanical Engineering from the Royal Corps of Naval Constructors since the Corps found its academic home in the Department in 1967, vacated his Professorship at the end of July 1977 to return to a senior post in the Ship Department of the Ministry of Defence at Bath. He had the tasks of broadening the M.Sc. course to cover merchant ship design and of building up the Department's facilities for experimental work both in the Engineering building and at Shadwell Basin. During his tenure, a most significant contribution has been the introduction of a series of lectures by distinguished experts on matters concerned with maritime technology, which has brought to the Department a widely representative group of people from the industry and from Government Departments. With the merging of the Royal Corps of Naval Constructors and the Royal Naval Engineering Service, the decision has been taken that the Mechanical and Electrical Engineers of the new Corps shall be educated here from 1978. Professor Rawson was responsible for the planning on which this decision, which is of great importance to the College, was based. Non-engineers in the College will remember Ken Rawson best for his two quite outstanding lunch-hour lectures, but all of us owe him a debt of gratitude.

Professor D. M. Wilson resigned from his Professorship of Medieval Archaeology on 31 December 1976, on his appointment as Director of the British Museum. He joined the Department of English Language and

Literature at the College in 1964, when he came from the British Museum to take up the Readership in Archaeology of the Anglo-Saxon Period, a post that was later transferred to the Department of Scandinavian Studies. The title of Professor of Medieval Archaeology was conferred on him in 1971, and in 1974 he was appointed Joint Head, with Professor Foote, of the Department of Scandinavian Studies. Professor Wilson's substantial contributions to scholarship have been widely recognised by the academic distinctions conferred upon him both in this country and abroad. On the undergraduate side, he successfully developed, for an Honours degree course, the new and attractive subject—Anglo-Saxon and early medieval European archaeology. His tenure of the Deanship of the Faculty of Arts, from 1973 to 1976, when he was faced with the difficult task of co-ordinating departmental economies within the Faculty, was outstandingly successful. But perhaps his colleagues will remember, most of all, his *bonhomie* and his contribution to the happiness and good fellowship of the College.

OBITUARY

We record with regret the death during the year of a number of members and former members of the College. They included one Honorary Fellow and four Fellows.

Emeritus Professor A. V. Hill, C.H., O.B.E., F.R.S., Honorary Fellow of the College, and one of the foremost scientists of his time, died on 3 June 1977 at the age of ninety. He joined the College in 1923, when he was appointed to the Jodrell Chair of Physiology, and from 1926 to 1951 he held at the College the Foulerton Research Professorship of the Royal Society, together with an honorary University Professorship of Physiology; his association was maintained up to the time of his death by honorary research appointments in the Departments of Biophysics and Physiology. Professor Hill was awarded the Nobel Prize for Physiology and Medicine for 1922; he was a Member of Parliament for the University of Cambridge from 1940 to 1945; and he held numerous important positions on national and international committees and other bodies, including the Secretaryship of the Royal Society from 1935 to 1945, membership of the War Cabinet Scientific Advisory Committee from 1940 to 1946, and the Presidency of the British Association for 1952. All this did little to diminish his output of research, which was widely recognised by the many honours conferred on him, both at home and abroad, including a large number of honorary degrees. Within the College he was Head of the Biophysics Research Unit, and his leadership helped to establish biophysics as a subject ripe for development, with important aims and a territory of its own. He served on the College Committee from 1950 to 1967, as the member nominated by the Fellows of the College, and on the Managing Committee from 1955 to 1967. The College has for long been proud of the distinction Professor Hill's work as an eminent scientist brought to it, and has been deeply appreciative of his concern for the detailed manage-

ment of College affairs, in which his wisdom and long experience were invaluable. 'AV' was a familiar figure in the College up to the late 1960s, when he retired to Cambridge; he will be remembered by the many colleagues whose respect and affection he inspired down the years.

The Fellows who died during the year were Dame Harriett Chick, at the age of 102, a former member of the Scientific Staff of the Lister Institute, whose activities added much to our modern understanding of nutrition; Dame Joan Evans, historian of French and English medieval art, and past President of the Royal Archaeological Institute and the Society of Antiquaries; Sir Louis Mbanefo, Chairman of the Anglican Consultative Council and formerly Chief Justice of Eastern Region of Nigeria; and Sir Roy Price, formerly High Commissioner for the United Kingdom in New Zealand.

Three members of the academic staff died during the year.

The College learned with deep regret of the death of Dr Cecily de Monchaux on 17 July 1977 after a short illness. Her death was particularly tragic occurring as it did only some three weeks after her marriage in New York to Dr Roy Schafer, the First Freud Memorial Professor at UCL, and her recent appointment as Associate Professor in the Department of Psychology at the New School of Social Research in New York. She came to the College from Australia in 1949. Although her work then was concerned with the experimental analysis of human memory, her interests were already moving towards clinical psychology and especially to psychoanalysis. She qualified as an adult analyst in 1952, trained by Anna Freud, and as a child analyst in 1961. With this background, she became a tower of strength in the Department, both as teacher and latterly as Tutor to third-year undergraduates. Her deep fund of common sense and her lively sense of humour made her advice eagerly sought after by both staff and students. She was a woman of wide interests, but none perhaps stronger than her interest in the Library. It was fitting that she should be a member of the Committee of Management for the Freud Memorial Professorship, and Chairman of its Sub-Committee. She commanded both respect and great affection from all who knew her, and her loss is felt very deeply.

Dr J. R. Morris died on 1 June 1977. He came to the College in 1948 as Lecturer in Ancient History, being appointed Senior Lecturer in 1969. Coming from an unconventional background for an Ancient Historian, having read Modern History at Oxford before the war, he was a man of wide interests and original views of Ancient History. These showed themselves in his teaching, particularly in the first-year course for Classics students, which many found an unforgettably vivid and enlivening experience, and in his Special Subject on Roman Britain, where he used to the full his wide knowledge of English history and his deep feeling for its underlying continuities. They were also apparent in his activities as the effective founder and first editor of *Past and Present*, his editorship, along with A. H. M. Jones and J. R. Martindale, of the *Prosopography of*

the Later Roman Empire and in his controversial book *The Age of Arthur*, published in 1973. At the time of his death he was engaged in editing a translation, with facing Latin text, of the Domesday Book, the first edition to appear in print since the eighteenth century. Morris was a man of strongly-held ideals, a life-long socialist for humanitarian, not doctrinaire, reasons, totally unconcerned for personal advancement. His transparent sincerity and simplicity of character, combined with an engagingly conspiratorial manner, made him a memorable and endearing character, sadly missed by those who knew him.

Dr S. Zienau died on 18 October 1976 at the early age of 55 years. He had been a Reader in Physics at the College since 1965, having been appointed a Lecturer in the Department of Physics in 1954, following a period as ICI Research Fellow at Liverpool. Dr Zienau was trained in the old school of European physics, being a student of Heitler, Pauli and Fröhlich, after a distinguished period as a mathematics undergraduate at Birkbeck College. His name is familiar to solid state physicists as a co-author of the theory of the polaron through which, in 1950, field theory was introduced into solid state physics. He will also be remembered in the worldwide community of theoretical physicists for his important revisions of two classic texts in theory: both Heitler's *Quantum Theory of Radiation* (3rd ed.) and Mott and Massey's *The Theory of Atomic Collisions* (3rd ed.) owe much to his labour and insight. He had a phenomenal memory for the literature of theoretical physics and would recall from obscure journals published in the first half of the century the seminal work that could shed light on modern problems. His main later research interests lay in scattering theory and electrodynamics, but he had a scholarly interest in a much wider range of subjects.

Emeritus Professor Raymond Irwin died on 13 December 1976. He retired in 1969, having held the Directorship of the School of Librarianship and Archives since 1945 and the Chair of Library Studies since 1956. Under his direction, which was characterised by patience and foresight, kindliness and tactfulness, and a willingness to permit maximum freedom of study to staff and students alike, the School developed librarianship, archive, and information studies at all postgraduate levels. He played a leading part for many years in the affairs of the Library Association, and was its President in 1958.

Other former members of the academic staff who died were Professor V. H. Galbraith, the medieval historian, who was a part-time Lecturer in the School of Librarianship from 1926 to 1937; Dr H. F. Hoar, who entered the Bartlett School of Architecture as a student in 1925 and returned to hold a Lectureship in the Bartlett School and then in the School of Environmental Studies from 1955 to 1971, and who contributed to *Punch* under the pseudonym 'Acanthus'; and Lynton Lamb, a distinguished member of staff of the Slade School, where he was Head of Lithography, from 1950 to 1971, whose influence was particularly strong on the illustration and design of books in this country, and who for

some forty years was closely associated with the Oxford University Press.

On the administrative staff, Mrs Leokadia F. Kubiczek, who joined the Registrar's Department in 1967, died on 14 April 1977. Former members who died during the year included W. H. F. Nicholls, whose retirement from the post of Deputy Accountant in 1976, after forty-eight years' service with the College, was recorded in last year's Report; Miss Lily Cooper, a member of the administrative staff, first with the Secretary and then in the Registrar's Department, from 1920 to 1949; and R. S. Potter, who retired in 1966 as Laboratory Superintendent in the Department of Chemical Engineering, having been chief technician in the Department since its establishment in 1923.

Among former students who died in the course of the year were Miss Eileen Gray, designer and architect; H. Graham Pollard, author and bibliographer; and Robert Le Rossignol, generous benefactor of the College, who read Chemistry here in the early 1900s and did research with Sir William Ramsay.

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BY MEMBERS OF COLLEGE DEPARTMENTS

1 AUGUST 1976—31 JULY 1977

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APPENDIX I

NUMBERS OF STUDENTS, 1976–77

	Under-graduate	*Post-graduate*	*Totals*
Faculty of Arts	1,299 (233)	491 (159)	1,790 (392)
Department of Political Economy ..	223 (1)	28 (2)	251 (3)
Slade School of Fine Art	97 (5)	116 (10)	213 (15)
	1,619 (239)	635 (171)	2,254 (410)
Faculty of Science	1,236 (2)	*609 (139)	1,845 (141)
Faculty of Medical Sciences	301 (0)	2 (1)	303 (1)
Faculty of Engineering	398 (4)	227 (53)	625 (57)
Faculty of Laws	294 (9)	†154 (40)	448 (49)
Faculty of Environmental Studies ..	214 (0)	239 (46)	453 (46)
	4,062 (254)	‡1,866 (450)	5,928 (704)

The figures in brackets indicate the number of part-time students included in the total under each head.

*This figure includes 87 full-time and 25 part-time students working in the College Faculty of Medical Sciences who were registered in the University Faculty of Science.

†This figure includes 15 full-time students studying for an M.Sc. in International Relations who were registered in the University Faculty of Economics.

‡Of this number 1,048 full-time students and 410 part-time students were registered for higher degrees of the University of London; the remainder were working for higher diplomas of the University or of the College, or for the higher degrees of other universities or were engaged in research work, or attending postgraduate lecture courses.

APPENDIX II

UNIVERSITY FIRST DEGREE AND DIPLOMA AWARDS
1 OCTOBER 1976—30 SEPTEMBER 1977

FACULTY OF ARTS

B.A. Degree	1st Class Honours	2nd Class Honours Upper Div.	2nd Class Honours Lower Div.	3rd Class Honours	Pass	Total
Archaeology	1	—	—	—	—	1
Classics	1	7	3	3	—	14
Classics and Ancient History	—	1	—	—	—	1
English	2	17	17	2	—	38
French	3	14	6	1	—	24
Geography	3	21	19	—	—	43
German	3*	6	7	1	—	17
Hebrew	—	—	1	—	—	1
History	5	16	20	2	1†	44
Italian	—	1	1	—	—	2
Medieval Archaeology	1	7	—	—	—	8
Modern Iberian and Latin American Regional Studies	1	3	4	1	—	9
Philosophy	2	16	4	3	—	25
Scandinavian Studies	—	5	5	1	—	11
Ancient History and Social Anthropology	—	1	1	—	—	2
Anthropology and Linguistics	—	3	1	1	—	5
English and History of Art	1	3	2	—	—	6
English and Linguistics	—	1	1	—	—	2
French and History of Art	—	1	1	—	—	2
German and History of Art	—	—	1	—	—	1
German and Linguistics	—	1	—	—	—	1
German and Norwegian	—	1	—	—	—	1
German and Swedish	1	1	—	—	—	2
History and History of Art	—	3	—	—	—	3
Italian and History of Art	—	—	1	1	1	3
Norwegian and Icelandic	—	1	—	—	—	1
Philosophy and Economics	—	—	1	—	—	1
Philosophy and Greek	—	1	—	—	—	1
Philosophy and History of Art	—	—	3	—	—	3
Philosophy and Linguistics	1	—	1	—	—	2
	25	131	100	16	2	274

University Diploma in Fine Art: 16 students passed.

*Includes Suspense Year student.
†1 Candidate recommended for the Award of Aegrotat Degree.

FACULTY OF LAWS

LL.B. Degree	1st Class Honours	2nd Class Honours Upper Div.	2nd Class Honours Lower Div.	3rd Class Honours	Pass	Total
	—	27	50	8	2‡	87

‡1 Candidate awarded Aegrotat Degree.

FACULTY OF MEDICINE

Basic Medical Sciences and Pharmacology Examination: 113 students passed.
Second Examination for Dental Degrees: 51 students passed.

FACULTY OF SCIENCE

B.Sc. Degree	1st Class Honours	2nd Class Honours Upper Div.	2nd Class Honours Lower Div.	3rd Class Honours	Pass	Total
Anthropology	1	6	16	1	—	24
Applied Physics	2	2	5	1	3	13
Architecture	3	20	13	7	4	47
Astronomy	5	4	5	3	1	18
Astronomy and Physics	2	3	1	3	—	9
Biochemistry	1	6	8	4	1*	20
Biology	—	—	—	—	—	—
Botany	—	2	1	—	1	4
Chemistry	4	5	6	6	1	22
Chemistry and Physics	—	—	—	—	1	1
Combined Science	—	—	—	—	2†	2
Genetics and Microbiology	—	1	2	—	—	3
Genetics and Zoology	—	1	2	2	—	5
Geography	3	10	14	3	—	30
Geology	2	2	8	4	1	17
Information Science	—	—	1	1	—	2
Mathematics	8	3	17	12	2	42
Medicinal Chemistry	—	3	1	1	—	5
Microbiology	1	7	12	1	—	21
Pharmacology	1	5	3	1	—	10
Physics	3	4	2	4	1	14
Physiology	1	4	4	1	—	10
Psychology	9	18	30	—	—	57
Statistics	1	3	—	3	—	7
Statistics and Computer Science	—	1	—	—	2	3
Zoology	2	8	10	2	—	22
	49	118	161	60	20	408

B.Sc. (Intercalated) Degree	1st Class Honours	2nd Class Honours Upper Div.	2nd Class Honours Lower Div.	3rd Class Honours	Pass	Total
Basic Medical Sciences and Anatomy	4	4	2	—	—	10
and Biochemistry	1	—	—	—	—	1
with Biochemistry	—	2	1	—	—	3
and Pharmacology	1	5	—	—	—	6
with Pharmacology	—	3	—	—	—	3
and Physiology	1	5	1	—	—	7
with Physiology	—	1	1	—	—	2
with Psychology	1	5	2	—	—	8
with Zoology	—	1	—	—	—	1
Biomedical Sciences	2	10	6	—	—	18
	10	36	13	—	—	59

*Aegrotat Degree retrospectively awarded to 1976.
†1 Candidate recommended for the Award of Aegrotat Degree.

FACULTY OF ENGINEERING

B.Sc. (Engineering) Degree	1st Class Honours	2nd Class Honours Upper Div.	2nd Class Honours Lower Div.	3rd Class Honours	Pass	Total
Biochemical Engineering	1	4	—	1	2	8
Chemical Engineering	1	6	2	3	1	13
Civil, Structural and Environmental Engineering	5	13	8	5	2	33
Electronic and Electrical Engineering	3	7	5	7	2	24
Mechanical Engineering	1	1	2	3	5	12
Naval Architecture	4	6	4	5	—	19
	15	37	21	24	12	109

FACULTY OF ECONOMICS

B.Sc. (Economics) Degree	1st Class Honours	2nd Class Honours Upper Div.	2nd Class Honours Lower Div.	3rd Class Honours	Pass	Total
Economics	1	6	10	4	2	23
Economics and Economic History	—	4	3	1	—	8
Economics and Geography	—	4	8	—	2	14
Economics and Statistics	—	3	6	3	1	13
Economics and Social Anthropology	—	—	1	1	—	2
	1	17	28	9	5	60

B.Sc. Degree						
Economics	—	—	1	—	—	1
Economics and Geography	—	—	—	1	—	1
Economics and Social Anthropology	—	—	1	—	—	1
	—	—	2	1	—	3

B.Sc. (Economics) Degree						
Old Regulations	—	—	1	—	—	1

UNIVERSITY HIGHER DEGREE AND HIGHER DIPLOMA AWARDS

1 OCTOBER 1976 — 30 SEPTEMBER 1977

FACULTY OF ARTS

Ph.D. *Egyptology:* Anne Millard. *English Language and Literature:* John F. Cox, Keir D. Elam, Jennifer A. Levine, Ronald E. Neill, Fredric S. Schwarzbach, Richard K. Todd. *French Language and Literature:* Julia Woledge. *Geography:* Edda O. S. de Chaves. *German:* Roger H. Stephenson. *Greek:* Nick Bozanic, Adam Büllow-Jacobsen. *History:* Patrick E. Bryan, Malcolm H. Crook, Susan M. Doran, Leslie L. Doyle, ‡Robin D. Gwynn, Watson E. Lincoln, Andres A. Ramos. *School of Library, Archive and Information Studies:* Nicholas J. Belkin, Nigel A. Webber. *Philosophy:* Robert G. Blair, Paul Coates, David Conway, Freya Mora. *Phonetics and Linguistics:* Mohamed H. Heliel, Claude Simon. *Scandinavian Studies:* Richard I. Lustig, Hilary K. Murray. [29]

M.Phil. *School of Environmental Studies:* Joseph H. Adams. *School of Environmental Studies (Town Planning):* Frances K. Blunden, Richard H. Brown, John W. Burrows, David H. Cant, Janis Fishwick, Peter R. Goggs, Douglas A. Gordon, Philip Gratton, Hilary J. Howatt, Richard A. Johnson, Geoffrey T. Keogh, Michael A. Killingworth, Ute D. Kowarzik, Patricia J. Longdon, Marilyn Moss, Shelagh M. O'Brien, Julia M. Penny, Mary G. Pitt, Letitia M. Rankine, Simone P. Sharpley, Robert J. Smith, Sarah A. Spencer, Judith Wayne, Christopher N. Weston, Margaret M. Wood. *English Language and Literature:* Walter L. Weintz. *Slade School of Fine Art:* Peter De K. Dusinberre III. *History:* Lesley Stark. *School of Library, Archive and Information Studies:* Gholamhosain Tasbini. *Philosophy:* Philip E. J. Foster. *Phonetics and Linguistics:* Abul K. M. H. Rashid. [32]

M.A. *Architecture:* George L. McIlwaine, Ademola B. T. Pearce, George I. Sheldon. *Area Studies:* Figueroa V. Carro, Maria E. Estades de Camara, Nicola F. Gunn, Elizabeth J. Lethbridge, Benjamin Lisman, Owen P. McLaughlin, John A. N. Melliar-Smith, Ricardo Obregon Trujillo, Irene M. Osyczko, Robert W. Simmons, Zoe D. Spencer, Anne E. Thomas, Julie P. Winch. *Classics:* Elizabeth H. Scheuer. *English:* Gillian H. Beaumont, Kevin Halliwell, Wong Hok Chun, Kathleen E. Woolverton. *German:* Yasmin Ahmed, Colin D. Harnwell, Robert W. Hill, Ortrud Huttrop. *History:* Margaret J. Carey. *History of Art:* Elizabeth M. Driver, Robert E. Hirschhorn. *Library and Information Studies:* Dickson O. Agidee, Eva R. Blunden, Christine Burden, *David G. Cambridge, Bryan M. Charlton, Nurtan Egitimoi, Susan J. Fitchie, *Erin P. Fleming, Joseph Forsyth, Hilary M. Frazer, Raemonde L. Gower, Monica A. Greaves, Barbara A. B. Gubbin, Colston M. Hartley, *Kristin Indridadottir, Brian E. Lantz, Md A.

*Awarded Mark of Distinction. ‡Also registered at another Institution.

Latif, Alan F. MacDougall, Kathleen A. MacNab, Jacinta E. Mendez Kock, Paraskevas H. Michael, William E. Muter, Eisuke Naito, Rosslyn M. Nicholas, *Elizabeth A. Nicholson, Carlos I. Ortuno Velasquez, Brian L. Pearce, Margaret Redfern, Barbara J. Roe, Pauline A. Thomas, Christopher M. Turner, Vaughan Whibley, David M. Williams. *Phonetics:* Mohamed Benrabah, Lisa K. Huffman, Dragoslava Trandafilovic. [64]

University Postgraduate Diplomas: Archive Studies 12¶; Fine Art 41; Linguistics 10¶; Town Planning 1; Western European Archaeology 1.

FACULTY OF ECONOMICS

Ph.D. *Laws:* Ralph I. Onwuka. *Political Economy:* Mahfuzul Huq. [2]

M.Sc. *Economics:* Peter J. Burgess, Eugenio R. Carrion, Lynne Hamill, Justina M. Henderson, Man-Seok Kim, Hilary Metcalf, *Jeremy A. Peat, *Neil P. Record, Zarrin T. Saadat, John D. Shages, Gabrielle C. Wenban-Smith, Dorothy Wright. *International Relations:* Pervaiz Asghar, Henri J. Barkey, Nancy W. Fahy, Humberto Garza Elizondo, Angelica Hommerich, Abu H. M. Moniruzzaman, Hedda Ramsden, Sharon A. Steffen, Arnon Turel. *Planning Studies:* †Susan Bell, Wendy E. Chisnall, Karina A. Halstead, Teresa M. Miles, Paul D. Mugnaioni, Robert L. Page, †Philios G. Phylactis, Mirella Taiariol, †Judith West. [30]

FACULTY OF LAWS

Ph.D. Anna Brethima, Michael W. Bryan, Syamalkumar Chattopadhyay, Nathaniel B. C. Ineneji, Mary P. McHugh, Frederick H. A. Micklewright. [6]

LL.M. Politimi Alexandropoulou, Petros Anastassiades, Curtis L. Barlow, Penelope A. Boal, Ann N. Brice, Paul A. Cappi, Patterson K. H. Cheltenham, Peter C. Church, Brian R. Clapham, Ellen R. Conrad, Mark R. Davison, T. T. Durai, Mahindokht Faghfoori, Robert A. J. Farmer, Efstratios-Andreas Glyptis, Nicholas Goyios, Alexandra N. Hamawi, William J. Hickey, Bridget M. John, Helen John, Dimitris Lambadarios, Terrence J. Lestelle, Reginald H. Lobosky, Barry D. McCutcheon, Graeme R. McPherson, Gary J. A. Moore, Peter J. Murray, Neil D. Naliboff, Andreas-Constantinos Nasikas, Michael P. Ofori, Isaac Okyere-Darkoh, Don W. Pangman, John W. Perrett, Christine A. Pocock, Simon R. Roberts, Shmuel Romano, Joel Skapinker, Charles R. Stewart, David J. Stott, Maurice S. Sunkin, Phillip V. Tahmindjis, Than Nwe, Valesius V. Thomas, Sarantis Tzouganatos, Linda J. Vincent, Roger D. Welch, Yin S. Wong, Santiago M. Zabaleta Sarasua. [48]

University Postgraduate Diplomas: International Law 2; Shipping Law 17.

FACULTY OF SCIENCE

Ph.D. *Anatomy and Embryology:* Mary Brancroft, Vincent J. Miles. *Anthropology:* Alan J. Barnard, Haim Hazan. *School of Environmental Studies:* Gregory E. Parston. *Biochemistry:* Elizabeth S. Bone, Michael B. Cooper, Harinder M. Dani, Leslie A. Davidson, Farrokh Farin, Ian

*Awarded Mark of Distinction. †Retrospective Award to 1975–76 Session. ¶2 Candidates awarded marks of Distinction.

P. Hesslewood, Panayiotis Ioannou, Christopher J. Jones, Katharine B. Lieb, David W. R. MacDonald, Ian R. Phillips, Mustafizur Rahman, Aziza Salam, Suren R. Sooranna. *Biophysics:* Bogumil N. M. Zaba. *Botany and Microbiology:* Saman P. Amarakone, John Beardall, Devashis Mukerji, Vidal G. Rodriguez Lemoine, Mark Wade. *Chemistry:* Etmina Ahmed, Beverly E. Allen, David L. Andrews, Peter Avis, Antony R. Berry, John W. Cooper, Dariush Davalian, Christopher W. Doecke, John W. Everett, Hisham M. A. Fahmy, Malcolm L. Franks, Gregory P. Harper, Richard A. Henderson, Graham P. Jones, Wolfgang Koller, Mark E. Loveitt, Kumaran Mavinkal Kizhakkeveettil, Derek J. Mills, David I. Rawson. *Geography:* Emmanuel Badokwaya-Faith, Martin J. Bowen, Martin H. Cawood, Judith Pallot. *Geology:* Samir A-W Al-Assaf, Anthony G. Dore, Angus M. Duncan, Mohamed S. El Tohami, Paul R. Marshall, Clement C. Mgbatogu, Michael J. Oates, Ahmad Zamani. *History and Philosophy of Science:* Graham F. Williams. *Human Genetics and Biometry:* Frances J. Benham, Pauline A. Rogers, John Rostron, Clive A. Slaughter. *Mathematics:* Geoffrey R. Burton. *Pharmacology:* Christopher G. G. Aylmer, Graham E. Fagg, Sheila B. Flynn, David M. Katz, Karin E. Koller, Daniel Osborn. *Physics and Astronomy:* Graziella Branduardi, Peter C. Bruton, Douglas S. Butterworth, James P. Emerson, Stephen M. Fisher, Marion A. Hayes, Barbara Jones, Mahmoud H. Mahmoud Hamdan, Elizabeth Michelson, Richard J. Mitchell, James L. Pinfold, Anil K. Pradhan, Adrian J. Segar, Jan J. Sojka, John P. W. Stark, Peter R. Voke, Nicholas E. White, Allan J. Willis. *Physiology:* Francisco J. Alvarez Leefmans, Jill R. Carstairs, Geraldine F. Clough, Paul A. Fraser, John G. R. Jefferys, Jennifer R. Jessop, Richard A. D. O'Brien, Adam R. Yamey. *Psychology:* David J. Caudrey, Paul J. Ekblom, Bernard Mageean, Richard J. Phillips, Peter S. Walker. *Statistics and Computer Science:* Allan M. Skene. *Zoology and Comparative Anatomy:* Susan E. Evans, Nigel D. Hillen, Ellen B. Lane, William D. C. Lawson, Susan M. Pegrum, Bruce A. J. Ponder. [106]

M.Phil. *Anatomy and Embryology:* Peter J. Lynch. *Anthropology:* Benjamin W. Burt, Ainsley L. Dalli, Christopher J. Martin. *Chemistry:* Baidya N. Bandyopadhyay. *School of Environmental Studies:* Malcolm J. Davidson. *Geography:* John V. Blackburn. *Geology:* Paul J. Shaw. *Physics and Astronomy:* Gerald M. Webb. [9]

M.Sc. *Architecture:* Getachew Alemayehu, Oscar E. Azar Huguet, Suzanne M. Bedier, Russell A. Carr, Nigel R. G. Clarke, Theodor Didaskalou, Ross A. Donaldson, Brian T. Dorgan, *Michael J. Field, Alexander Gabrilakis, Frederik Herweijer, Kevin C. Jenden, Pauline A. Knight, Peter D. D. Lawton, Robert Newcombe, *Peter E. S. Pover, John N. Saad, Alexandra Sotiropoulou, James A. Sparks, Angelique P. Svoronou, Arthur Tallon, Victor Q. H. Tan, *Julienne M. Thon, Ryuji Yoshida. *Biochemical Engineering:* Francisco J. Viliesid Alonso. *Biochemistry:* Fidelis M. Achenjang, Christopher J. C. Bolton, Jagdish L. Devalia, Michael J. Paganini, Jane A. Plumb, Marilyn S. Wasserstein. *Computer Science:* Djahanshah Arastoozad, Christodoulos Cacoullis, Cheng Chi Pui, Justyn R. Davies, Anthony Dimopoulos,

*Awarded Mark of Distinction.

Benjamin T. Evans, Timothy M. Haigh, Brian W. Irving, *John O, Johnson, Anna K. Kroczak, Soon Y. Lee, Howard J. Lethbridge, Eric D. Ramsay, Peter A. L. Williams. *Conservation:* Richard Brunstrom, Andrew M. Heaton, Michael W. Naylor, Matthew J. O'Brien, *Heather J. Robertson, Valerie A. Spencer, Martin S. Warren, Charles H. Wright. *Educational Psychology:* Christopher J. Ashton, Timothy K. Bunn, Myra Evans, Simon L. Evans, Sheila C. Gregory, Michael W. Hughesman, Lesley A. Hulme, Stephanie Owen, Marie A. Urbanowicz, Jean V. Wayman. *History and Philosophy of Science:* Roger S. C. Gill, Edward J. McMahon, John Newman, Finian O'Boyle, Keith Penny, Taqi Sudderuddin, David R. Tate, Dorothy V. Turner, Kathleen A. White. *Hydrogeology:* Nadeem N. Al-Rawi, Roberto M. Antonio, Salah E. S. A. R. Elnatiq, Franklin A. Gonzalez Contreras, Richard C. Lakey, Thabit D. Madher Bashi, Harriet G. Nash, John R. Riden, Philip C. Smart, Margaret A. Steel. *Information Science:* Valentine S. Reilly. *Marine Earth Science:* Alan J. Bowden, Stephen W. David, Alberto J. Q. Fernandes, Marilyn Merryweather, George B. Stevenson. *Micropalaeontology:* Alan J. Ashburn, Chow Yue Cheong, Paul A. Comet, Donaid L. Craig, Anthony M. Kaye, John E. Mabillard, Ian A. Stuart, Anthony J. Weighell. *Physiology:* Silvia M. Berry, Malcolm Irving, Richard Miles, Dennis A. Wray. *Statistics:* Kenneth Brown, *Kathryn M. Chaloner, John M. Creet, Timothy J. Dickson, Raymond W. Evans, Allen F. Firth, Robert W. Golden, *Victor Holman, Norma E. Lavery, Lynda M. Lawson, Jacqueline Morris, Fulvio Spezzaferri, Isabella Verdinelli. *Vertebrate Palaeontology:* Stephanie H. Butler, Teresa A. Feldman. [115]

University Postgraduate Diplomas: Material Culture 1†; Social Anthropology 7‡.

FACULTY OF ENGINEERING

Ph.D. *Chemical and Biochemical Engineering:* Stephen W. Carley-Smith, Farhad-Ali Farhad Pour. *Civil and Municipal Engineering:* Paul Davies, Stuart G. Davis, Joseph S. Fernando, Benjamin A. Quaye, Paul G. Sibly. *Electronic and Electrical Engineering:* John A. Davies, Ho Ka-Leung, Mark Johnson, Abdullah Y. Niazi, Dennis N. Pim, Mohsen Razaz, Madiha S. A. E. F. S. Rizk. *Mechanical Engineering:* Nicholas F. Boutle, David R. Broome, Hassan A. El-Gamal, Madjid Raoufi-Rad. *Photogrammetry and Surveying:* Arthur L. Allan, Peter J. Scott. [20]

M.Sc. *Biochemical Engineering:* Robert M. Atterton, William S. Deeley, Peter J. V. Fryer, Meirion G. Jones, Theodore Kyrlis, Athanasios Panteloglou, Natale Vittori Bianchini. *Ergonomics:* John Davison, Charles G. Lunny, Antonios Vitalis. *Microwaves and Modern Optics:* *Peter R. Ball, Peter Darvas, Syed N. Ishrat, *Robert A. Minasian, Manouchehr Mirabdolbaghi, Soheil Zarbafian. *Ocean Engineering (Mechanical Engineering):* Frank E. De Grim, Philip N. Payne, George L. Randall, John N. Stanfield, John B. Waite. *Ocean Engineering (Naval Architecture):* Ramanu Abiola, Roy E. C. Barwick, Owen S.

*Awarded Mark of Distinction. †Candidate awarded a mark of Credit. ‡2 Candidates awarded marks of Credit and 1 Candidate awarded Mark of Distinction.

Brown, *David G. Faulkner, William Gass, George Gryllakis, Nirmal P. Gupta, Peter J. Llewellyn, Robin W. Mandeville, Nikolaos E. Mikelis, Jacob J. Naude, Man M. Singh, Michael A. Stenson, *Pandeli Temarel, Willem J. Van Griethuysen, Christopher J. Williams, *Paul G. Wrobel. *Photogrammetry:* Olusola Atilola, Willibald P. Segu. *Surveying:* *Stephen Mayles, *Timothy K. Rylance. [42]

FACULTY OF MEDICINE

Ph.D. *Zoology and Comparative Anatomy:* Jonathan G. Bell, Susan J. Rivett. [2]

*Awarded Mark of Distinction.

COLLEGE DIPLOMA AND CERTIFICATE AWARDS

1 OCTOBER 1976—30 SEPTEMBER 1977

FACULTY OF ARTS

Certificate in Archive Administration: Olusola Olubode Awodogan, Serman Wedson, David Chavula, Khondkar Mahbubul Karim, Eric Morris Turner. [4]

Diploma in English Linguistic Studies: Donn Patrick Byrne. [1]

Diploma in Film Studies: Michael Modral Allen, †Anne Elizabeth Cottringer, William John Sydney Percival Fenton, Peter Simon Finch, Christopher John Hale, Jane Hershey, †Mark Graham Nash. [7]

Diploma in Library and Information Studies: Alain Besson, Halina Genowefa Borys, Deborah Anne Bragan Turner, Jacqueline Burrell, Stephen John Bury, Elizabeth Carew, Anne Elizabeth Cobby, Stuart Leslie Cole, Juliet Rosemary Congreve, Lilian Amy Dale, Claire Eve Drinkwater, David Farley, Patricia Foulkes, Stephen John Goldwater, Patricia Ann Graham, Hilary Marion Bell Gresty, Christopher Anthony Hall, Stephen Thomas Harling, Margaret Anne Harris, Ruth Mary Harris, Joy Herring, Eileen Gay Hutchens, Michael Kidd, Barbara Joan Kissick, Jacqueline Anne Leal, Neil Andrew Mackinnon, Diana Marion Mercer, Michael Francis Mulcay, Linda Jean Parr, Mary Jane Garforth Patrick, Rosemary Veronica Publicover, Sheila Reid, *Mary Elizabeth Spencer Roebuck, Debjani Sengupta, Geoffrey Smith, Marjorie Joyce Smith, Marian Stewart, Theresa Lindsie Thom, Clive Russell Vaisey, Pnina Wentz, Sylvia Winsor, Bridget Anne Wright, Penelope Ann Wright. [43]

Certificate of Proficiency in Phonetics: Velia Aldea, Sonia Arreaza, Abdoulaye Barry, James Baxter Brown, Diana Rose Caisey, Jean-François Céas, Annick Chadouteaud, Christine Anne Collier, Julia Margaret Crawford, Noèle Deymarie, Daniel Isimhenmhen Egbe, Hasnee El-Hachemi, Maria Josefa Fernandez Llamas, Katherine Gaspari, Irene Elsie Harries, Amanda Janette Harris, Brita Elisabeth Haycraft, Anne Carmel Hegarty, Susan Jennifer Magdalen Hitch, Mark Andrew Huckvale, Brigitte Hildegard Charlotte Hurrell, Katharine Jane Jarah, Juan Julià Muné, Estela Maria Krause, Thomas Rick Hardy Yim-Mo Lai, Milagros Lea, Helen Elizabeth Lowe, Gail Ann Lutton, Angela Maria Mari, Hiltrud Martens, Angeles Medina Puerta Roger Kenneth Moore, Saara Helena Nyyssönen, Marie-Christine Noëlie Pellegrin, Catherine Mary Posford, Dagmar Rau, Gwyneth Tyson Roberts, Gislaine Rossignol, Liisa Helena Sinkkonen, Jean Barbara Smith, Marcus Späth, Judith Anne Staines, Gray Travers Standen, Judith Mary Still, Annette Ruth Tinsley, Margaret Tosswill, Richard Thomas James Trotman, Christopher Alan Warde-Jones, Susan Margaret Watson, Giles Peter Williams. [50]

Certificate in Social Research (Developing Countries): Rafael Silvestre Acevedo, Abowork Ali, Mathias Chinsonje Banda, Bai K. M. Bojang, Beatriz Elena Febres-Cordero de Perez, Ernest Joseph Felipes, Narendra Kumar Garg, Rona Raoufi Hakikat, Shirley Hyacinth, Paul R. Jeffy, Herbert Borbor Sama Kandeh, Shir Aqa Zaeem Keshawerz, Mohammaddin Mallick, Edna

*Awarded with Distinction. †Awarded with Merit.

Chiteu Maluma, Yousif Ali Mirza, Julius Benedict Mwandikwa Mutia, Angelita Obordo, *John Yaw Owusu, Miriam Paep, Mohammad Ahsan Reaz, Napas Sirisumbhand, Nagarathnam Thirupadu. [22]

FACULTY OF SCIENCE

Diploma in Conservation: Richard Brunström, Andrew Martin Heaton, Michael William Naylor, Matthew James O'Brien, *Heather Jane Robertson, Valerie Anne Spencer, Caroline Elizabeth Steel, Martin Stanley Warren, Charles Hilary Wright. [9]

Diploma in Hydrogeology: Chukuemeka Ndudim Ajandu, Nadeem Naji Al-Rawi, Roberto Moreno Atonio, Sarah Beeson, Franklin Adolfo Gonzalez Contreras, Richard Charles Lakey, Thabit Daoud Madher Bashi, Harriet Gabrielle Nash, John Russell Riden, Philip Charles Smart, Margaret Anne Steel. [11]

Diploma in Micropalaeontology: Alan John Ashburn, Mark Capsey, Sarah Jane Chance, Chow Yue Cheong, Paul Alexander Comet, Donald Liam Craig, Steven Charles Davies, Vivienne Anne Edwards, Bekir Esat, David John Horne, Anthony Michael Kaye, John Edward Mabillard, Patricia Ann Mountford, Ian Andrew Stuart, Anthony John Weighell. [15]

Diploma in Statistics: Clive Michael Simpson. [1]

FACULTY OF ENGINEERING

Diploma in Biochemical Engineering: Robert Miles Atterton, William Stuart Deeley, Peter John Vincent Fryer, Meirion Gayford Jones, Theodore Kyrlis, Athanasios Panteloglou, Francisco Jose Viliesid Alonso, Natale Vittori Bianchini. [8]

Diploma in Chemical Engineering: Siu Wah Chiu, *Chua Choo Ching, John William Curtis, Stephen Roy Fitzpatrick, Matthew William Forster, Giancarlo Antonio Fossa, *Alan James Lees, David Menzies Beattie Leggeat, David Maxim Rayburn. [9]

Diploma in Microwave Engineering: *Peter Raymond Ball, Peter Darvas, Qureshi Muhammad Daud, Syed Naeem Ishrat, *Robert Aram Minasian, Manouchehr Mirabdolbaghi, Soheil Zarbafian. [7]

Diploma in Ocean Engineering: Ramanu Abiola, Roy Edward Charles Barwick, Owen Symon Brown, Frank Edmund De Grim, *David George Faulkner, William Gass, George Gryllakis, Nirmal Parshad Gupta, Peter John Llewellyn, Robin William Mandeville, Nikolaos Emmanuel Mikelis, Jacob Johannes Naude, Philip Nicholas Payne, Hugh Michael Oppen Pratt, George Leon Randall, Man Mohan Singh, John Norman Stanfield, Michael Anthony Stenson, *Pandeli Temarel, Willem John Van Griethuysen, John Banks Waite, Christopher John Williams, *Paul Geoffrey Wrobel. (23)

Diploma in Photogrammetry: Roohollah Babaee-Mahani, Julian Clive Boardman, Andreas Georgopoulos, Reginald John Gibson, *Stuart Ian Granshaw, John William Gregor, Maarouf Ahmed Mohamed, Joseph Obumkere Ogbue, Simon Talbot Shreeve. [9]

Diploma in Surveying: John Roger Gains Harrop, Robert Hepple, Christopher Robert Charles Preston, Shaun Arnold Reynolds, Frederick Graham Tourney, Arthur John Waywell, Richard John Wylde. [7]

*Awarded with Distinction.

FACULTY OF ENVIRONMENTAL STUDIES

Diploma in Architecture: Stephen Brandes, Peter Collins, Peter Frederick Rivers Currie, Akbar Darabi-Fard, Andrew Alexander Fullerton, David Leonard George Halford, Martin Tade Heijne, John James Hyett, Millern Prince Jarrett-Thorpe, Gregory William Koplick, *Karin Kubaschewski, Patrick Oliver Larkin, Christine Leyland, Elena Maria-Montserrat Lloyd, Norman Lucey, *Shelagh McLaren, Iain Wills McLellan, Kim Elizabeth McWilliam, Glenn Anthony Patten, George Petrides, Christina Audrey Pocklington, Niranjana Ponniah, Alice Eleanor Poole, Egidio Rotunno, Lysa Lynn Schloesser, Graham Robert Sherwin, James Wesley Stuart, *Nadir Mahedi Mohamedali Tharani, David Thompson Young. [29]

Diploma in Design and Planning Education: Maria Eugenia Molina de Azar. [1]

Certificate in Development Planning: Abdul Qaiyum, Lal Badshah Afridi, Joseph Alexander, Mirvet Abbass Morcy Allam, Humaid Ahmed Al-Noaimi, Juan Jose Alvarado, Mat Saad Bahari, Hitihamy Mudiyanselage Herath Banda, Ramesh Vishnupant Bapat, Aminullah Chaudry, James Cecil Cocker, Emmanuel Idrisu Cofie, Jose Corral, Muhammad Arief Djamaluddin, Mohamed Abdel Moneim Mohamed Elgamil, Theophilus Tlamelo Gaboutloeloe, Nduuru Githire, Shamsul Haq, Constantinos Philokyprou Ioannides, Noriyoshi Konzoh, Durgaji Bhimrao Kunthe, Man Fai Lai, Michael Waterton Lee, Thambithurai Mahalingam, Neelam Datta Malik, Cecil John Maruma, Jasmin Sam Mistry, Ramon Motilla, William Sililo Mufana, Ashwani Kumar Narang, Bahlul Khan Nasir, Hanem Abdel Aziz Negm Negm, Stephen Baldwin Ntswana, Eze Ogbueri Ajoku Nwala, Anthony Jansen Nwanegbo Nzeribe, Kofi Omane, Kwame Attah Owusu, Parwez Parwez, Tarlok Singh Punn, Abdul Rahman Rahimi, Arachchige Ebert Perera Ranasinghe, Peter Benjamin Osborne Sam, Edwin Sangoyo, Bosista Kumar Sengupta, Mohammad (Sharif) Ahmad Sharif, Mohammad Ahmad Sheikh, Girish Chandra Srivastava, Darmawan Tas'an, Jonathan Paul Tucker, Robertus Hendrikus Johannes Van Gemert, Win Myint. [51]

Diploma in Development Planning: Md Aftabuddin, Antonio Abraham Carrillo Arronte, Howard Davies, Benjamin Leonardo Diaz Castaneda, Hector Escamilla De La Garza, Diamora Josefina Freites Viani, Gerardo Garcia Huidobro Severin, Judith Garza Fassio, Ximena George-Nascimento Lara, Carlos Arturo Gonzales Villegas, Jorge Ronaldo Hampton, Urai Hongskul, Sarah Ibanda, Teuku Sachrul Ismail, Nelson Alexis Jimenez, Farid Kamal Bin Hussain, Samuel Kikuba, Leon Kramarz, Colombina Marina Lovaton Ginebra, Agrippa Sheleni Madlela, Hernan Raul Martinez, Ligia Esther Mogollon, Luis Alberto Monsalve, Syed Abu Hamid Naqvi, Sjarif Nurdjaman, Adolfo Pomar, Mireya Rosales, Rozahn Bin Abdullah, Mohammad Sediq, Diplal Prasad Shah, Mohan Prasad Sharma, Lab Kumar Shrestha, Jiri Skopek, Franklin Martin Soffer, Salih Mohamed Hassan Swar El Dahab, Myriam Talavera, Claire Allison Tavares, Girma Teklu, Wilhelm Wiesmann, Roslan Zaris, Kamil Abdelmagid Ahmed Zein. [41]

*Awarded with Distinction.

SCHOLARSHIPS, STUDENTSHIPS, AND PRIZES COLLEGE AND UNIVERSITY AWARDS

COLLEGE AWARDS

Charlotte Ashby Prize (*Laws*)—Catherine M. Newman.
Barlow Prize (*Electronic and Electrical Engineering*)—J. A. Davies.
Herbert Batsford Prize (*Architecture*)—N. A. Lee Evans.
Thomas Witherden Batt Scholarships (*Science*)—C. G. Knight, A. W. Wishart, M. J. Osborne, P. G. Edwards.
Leonard Bayliss Memorial Prize (*Physiology*)—Alyson A. Bowhay.
Francis Perch Bedford Prize (*Zoology*)—Jill T. Norman.
Boise Scholarships (*Fine Art*)—A. Bunkum, J. R. Groom, C. A. Hodgson, Hilarie Mais, H. N. Metcalfe, Annabel Overbury, Jane P. Patterson, Julia C. C. Rogerson, A. Turnbull, Charlotte E. Verity, Joanna Volley, Gerda S. Roper.
Bonney Prize (*Geology*)—J. D. Price.
R. E. Bradbury Memorial Prize (*Anthropology*)—S. K. Dreyer.
Brodrick-Parry Prize (*Geography*)—Gillian A. Russell.
Bunnell Lewis Prize (*Latin Verse*)—Helen M. Dermit.
Rodney Burn Prize (*Fine Art*)—M. S. Rees Roberts.
Chadwick Medal and Prize (*Civil Engineering*)—Gan Boon Khuay.
Antonio Cippico Medal and Prize (*Italian*)—Penelope Parkinson.
Clinton Prize (*Electronic and Electrical Engineering*)—P. K. Nagar, J. G. Schoenenberger.
Cowley Prizes (*Library and Information Studies*)—E. P. Fleming, E. Nicholson.
Dawes Hicks Postgraduate Scholarships in Philosophy—J. H. Kaler.
Donaldson Medal (*Architecture*)—Penelope H. M. Garnham-Wright.
Early English Text Society's Prize—Oonagh G. M. G. A. Sayce.
Elliot-Blake Studentship—Karen P. Steel.
Environmental Design Prize—Sarah J. Murray-Smith.
Esso Chemical Travelling Scholarships (*Chemical Engineering*)—S. B. Dunford, J. B. Hayes.
Richard Fitzgerald Prize (*Laws*)—W. H. D. Paton.
Sir Banister Fletcher Prize and Medal (*Architecture*)—Shelagh McLaren.
Flinders Petrie Scholarships in Egyptian Archaeology—Lisa Giddy, J. M. Murphy.
Daryll Forde Award (*Anthropology*)—Pauline Roper.
Carey Foster Research Prize (*Physics*)—T. R. Twomey.
Eva Grunwald Memorial Prize (*French*)—Elaine Ablett.
Violet Hall Prize (*French*)—Jane Snell.
Hart Prizes (*Photogrammetry and Surveying*)—S. I. Granshaw, R. Hepple.
Archibald P. Head Memorial Medal Prize (*Mechanical Engineering*)—C. B. Freeman.
Heimann Medal (*German*)—Mary Smyth.
T. G. Hill Scholarship (*Botany*)—J. H. Dodds.
Elsie Hitchcock Prize (*English*)—Oonagh G. M. G. A. Sayce.
Hollier Scholarship in Greek—Mary Manziou, Helen M. Dermit.
Hollier Scholarship in Hebrew—H. Rosenwasser.

Hotine Exhibition (*Photogrammetry and Surveying*)—J. C. Boardman.
R. B. Hounsfield Prize in Town Planning and Civic Engineering—R. H. Brown.
R. B. Hounsfield Prize in Traffic Engineering—N. F. Kaimakamis, C. Petousis.
R. B. Hounsfield Scholarship in Traffic Engineering—K. H. Khaw.
Joseph Hume Scholarship in Law—A. J. Woodcock.
Huntingdon Research Centre Prize (*Histology Part I—Medical Sciences*)—Alison A. Tarling.
Hurst Prize in English Law—L. P. Markham.
Institution of Civil Engineers Prize—K. E. W. Lissowski.
Institution of Electrical Engineers Prize—D. J. Price.
Institution of Mechanical Engineers Prize—S. J. Wade.
Jackson Lewis Scholarships—N. E. Dawton, Judith L. Klavans-Rekosh, J. M. Sanchez-Ron, Jennifer R. Jessop.
Sir George Jessel Studentship in Mathematics—S. J. Avis.
Jolowicz Prize (*Roman Law*)—Jennifer M. Marr.
Ker Memorial Prize (*English*)—G. B. Posner.
Kitson Prize (*Chemical Engineering*)—M. A. Khakoo.
Dr R. Kohn Prize (*Physiology Part I—Medical Sciences*)—Helen M. Dunn.
Library and Information Studies Exhibitions—Sally M. Grover, Mary E. Hartley.
Lloyd Scholarship in Modern Greek—F. Gamberini.
Malden Scholarship (*Greek*)—Susan M. Bonfanti.
H. S. W. Massey Research Prize (*Astronomy*)—A. P. Phillips.
Maxwell Law Prize—M. W. Cuthbert.
Merck Sharp and Dohme Ltd Prize (*Biochemistry Part I—Medical Sciences*)—Amanda J. Ramirez.
Merck Sharp and Dohme Ltd Prize (*Genetics Part II—Medical Science*)—Catherine M. Suter.
Sir William Meyer Essay Prizes (*Geography*)—Gillian A. Russell, S. W. Baker.
Sir William Meyer Prize (*Geography*)—Amanda J. Poole.
Sir William Meyer Prize (*History*)—M. C. B. Berleigh, J. Warner, prize equally divided. Highly commended, Marianne E. McMillen, C. P. Stevens, E. Juliet Weale.
Sir William Meyer Travelling Studentships (*History*)—Janet E. Evans, Pamela Foley, Sarah F. Hunter, Jane Dodd, Judith Milburn, Eleanor F. Jones.
John Stuart Mill Scholarship in Philosophy of Mind and Logic—J. H. Kaler.
Momber Scholarship in Geology—Barbara A. Sotowicz.
Momber Scholarship in Statistics—D. G. Cook.
Rosa Morison Postgraduate Scholarships in Arts—R. H. Mace.
Rosa Morison Scholarship in English Language and Literature—Lynne Truss.
Morley Medal (*Modern English Literature*)—Lynne Truss.
Morris Prize (*Geology*)—Sarah Shearme.
Melvill Nettleship Prize for Figure Composition (*Fine Art*)—Melody M. G. Crocker.
Catherine Maude Pearce Scholarship for Senior Women Students—Margaret C. A. Koppel, Stephanie M. I. Stuart, prize equally divided.
Perren Studentships (*Astronomy*)—Graziella Branduardi, J. J. Settle.
Platt Prizes (*Greek*)—Emma B. Seller, H. N. Parker.
Political Economy Scholarship—M. Pemberton.
Harry Poole Prize (*Chemistry*)—J. P. T. Wilkinson.
Ramsay Memorial Medal (*Chemistry*)—S. C. Rogers.
Mary Rischgitz Prize (*Fine Art*)—Carole M. Page.

Graham Robertson Travelling Scholarships (*Fine Art*)—P. Dunn, A. Napier.
Robert Ross Scholarship in Fine Art—R. H. K. Clarke.
Hester Rothschild Scholarship in Hebrew—H. Rossenwasser.
Schafer Prize in Physiology—G. D. Dawson.
Slade Prizes—Charlotte E. Verity, Jane Lewis.
Smith Kline and French Laboratories Ltd Prize (*Medical Sciences*)—A. M. S. Brown.
Steer Prizes (*Fine Art*)—Jenny Okun, Jane Patterson.
Stevenson Prize (*Applied Mathematics*)—E. W. L. Ginn.
Sir Andrew Taylor Prize in Architecture—Karin Kupaschewski.
Sir Andrew Taylor Prize in Fine Art—J. S. Scott-Miller.
C. A. R. Tayler Prize (*Physics and Astronomy*)—R. G. Parlour.
Henry Tonks Prize (*Fine Art*)—Joanna Volley.
Troughton Scholarship—Barbara A. Sotowicz.
Tuffnell Scholarships (*Chemistry*)—M. R. Draper, I. P. Rothwell.
A. J. V. Underwood Exhibition (*Chemical Engineering*)—M. B. Shah.
L. F. Vernon-Harcourt Prize (*Civil Engineering*)—Leung Ming Biu.
Viking Society Prize—Kirsten S. Williams.
Webber Prize (*Laws*)—Jennifer M. Marr.
Dr T. D. Whittet Prize (*Pharmacology Part II—Medical Sciences*)—Alison J. Harries.
Audrey Wykeham Prize (*Fine Art*)—Annabel Overbury.

FACULTY MEDALS AND PRIZES

Engineering: Goldsmid Medal and Prize—M. O. Stevens.
Environmental Studies: Medal and Prize—A. McD. Laing.
Laws: Andrews Medal and Prize—M. W. Cuthbert.
Medical Sciences: Medal and Prize—A. Jackowski.
Science: Medal and Prize—M. Allen.

SESSIONAL PRIZES

Anthropology: Rosa Morison Prize—T. Harrison. *M. G. Smith Prize*—Helen M. Walker, C. R. Mira-Smith, prize equally divided.
English: Campbell Clarke Scholarships—(1) Jacqueline Wright, (2) Susan I. M. Suess. *West Scholarship*—Lucy Hudson.
Fine Art: Coldstream Prize—D. M. Hurley. *Monnington Prize*—N. J. Hamper.
French: Rosa Morison Prizes—(1) A. Leak, (2) Susan Watson, (3) Julia Swarbrick.
Geography: College Prize—Janina M. K. S. Brzeskwinski. *H. C. Darby Prize*—Sarah Buchanan, S. W. Baker, prize equally divided. *Maconochie Prize*—Deborah H. Potts, *1903 Prize*—J. G. Clarke.
German: Robertson Prize—Ute M. Bernard. *Willoughby Prize*—Mandy J. Jackson.
Greek: Long Prize—D. J. Millett.
History: Alfred Cobban Prize—M. C. Abbott, M. D. W. Bell, prize equally divided. Highly commended, A. D. Meikle, S. A. Patterson. *Dolley Prize*—H. Nora Wintour. *Pollard Prize*—Janet E. Evans, Carolyn M. Povey, prize equally divided. High commended, Susan Hockham, C. R. Mira-Smith. *West Prize*—Deborah M. Love.

History of Art: Gombrich Prize—Janette E. Ringsell. *Wittkower Prize*—Sabina M. Fursden.

Italian: Sir Anthony Panizzi Prize—Christine A. Collier.

Latin: Key Prize—Moira J. Halliday.

Philosophy: Dawes Hicks Scholarships—(1) Patricia Walsh, (2) Clayre L. Bryans, B. Hutchinson, prize equally divided.

Political Economy: Hume-Lloyd Scholarships—(1) J. M. Silvertown, (2) J. G. Clarke, (3) P. S. Capella, (4) T. J. Barnes, (5) P. A. Brice, (6) D. K. A. Shah.

Scandinavian Studies: Rosa Morison Prize—Astrid E. Arnold, R. S. Vale, prize equally divided. *Crabtree Prize*—B. Ager.

Spanish: Alcala Galiano Prize—Sally A. Bowman.

Laws: Andrews Prizes—(1) L. P. Markham, (2) Catherine Newman, (3) Jenifer Harding, (4) Elizabeth Kleinerman, (5) H. Frydenson, M. Joscelyne, prize equally divided.

Architecture: Bartlett Prizes—(1) Gillian R. Owens, (2) Maria Vassiliadou, (3) Teresa A. Borsuk.

Chemistry: C. K. Ingold Prizes—(1) Hilary J. Beasley, (2) K. G. Bilyard.

Mathematics: Filon Prize—Mariette Davis. *Hill Prize*—K. G. Ashley. *Jeffery Prize*—Valerie Bacon.

Pharmacology: H. O. Schild Prize—Martha L. Graber.

Physics and Astronomy: William Bragg Prize—A. Bridger, R. G. Parlour, prize equally divided. *Oliver Lodge Prize*—A. R. Weidberg. *Wood Prize*—C. R. Petts, S. Monaghan, prize equally divided. *Huggins Prize*—D. E. Maslen.

Physiology: Foster Prize—S. Sharma. *Sanderson Prize*—T. Z. Aziz.

Psychology: Burt Prize—Sharon F. Liburd. *McDougall Prize*—E. J. Jaldow, Ewa A. Zarkowska, prize equally divided. *Spearman Prize*—Vanessa M. Linney, Helena Medlik, prize equally divided.

Statistics: Egon Pearson Prize—Janet B. Rawlinson.

Zoology: Zoology Prizes—(1) J. M. F. Robbins, (2) Marie-Anne Shaw.

Chemical Engineering: Goldsmid Prizes—(1) C. J. Langley, (2) C. M. Chapman.

Civil and Municipal Engineering: Goldsmid Prizes—(1) J. Tan Kwok Yew, (2) Lim Kong Cheng, (3) So Cheung Ping.

Electronic and Electrical Engineering: Goldsmid Prizes—(1) E. M. Azoff, (2) D. M. Howard, (3) M. J. Kennedy.

Mechanical Engineering: Goldsmid Prizes—(1) P. A. Ioannou, (2) M. D. Challoner.

Medical Courses, Part I Examination: Drummond Prize in Biochemistry—Rosamund M. Pope. *Glaxo Prize for Best Aggregate Performance in Part I*—S. N. Powell, Alison A. Tarling, prize equally divided. *I.C.I. Prize in Anatomy*—M. R. Jarmulowicz. *I.C.I. Prize in Physiology*—C. J. Moss.

Medical Courses, Part II Examination: Cluff Prize in Physiology—N. W. Wilson. *Cuxson Gerrard Prize in Pharmacology*—N. W. Wilson. *Drummond Prize in Biochemistry*—Marian J. Perkins. *Elga Prize in General Pathology*—Catherine M. Suter. *Suckling Prize in Neurosciences and Behavioural Sciences*—S. G. Pollard. *Wellcome Prize in Human Biology*—R. F. Miller. *Wyeth Prize for Best Aggregate Performance in Part II*—Alison J. Harries, N. W. Wilson, prize equally divided.

UNIVERSITY POSTGRADUATE AWARDS

Anthropology: M. C. Donmall (2nd year), Ayse N. Sirman (2nd year). *Architecture:* J. Peponis. *Botany and Microbiology:* J. H. Dodds (2nd year). *Chemistry:* Z. Kisiel (2nd year). *Geography:* T. Dormer (2nd year). *Laws:* M. D. Kretzmer (Edmund Davis Scholarship, 2nd year). *Physics and Astronomy:* V. Goetcherian (2nd year). *Zoology:* J. M. Hollands.

APPENDIX VI

BENEFACTIONS, DONATIONS, RESEARCH GRANTS AND CONTRACTS

The College Committee makes grateful acknowledgment of the following:

Asthma Research Council

£6,563 for the Department of Pharmacology for the measurement of cell-bound antibodies in asthma and allergy.

Beecham Pharmaceuticals Research Division

£900 in support of a CASE studentship in the Department of Zoology and Comparative Anatomy.

The British Academy

£10,164 for work in the Department of Greek on unpublished oxyrhynchus papyri.

British Antarctic Survey

£1,917 for the Department of Photogrammetry and Surveying for a computation and statistical analysis of the British Antarctic Survey's networks.

British Heart Foundation

£5,446 for the Department of Physiology for the study of the physiological and morphological correlates of the function of terminal lymphatics.

The British Library

(1) £28,000 for the Department of Statistics and Computer Science for the study of the requirements and implementation of facilities for connecting U.K. Hosts to EURONET.

(2) £6,300 for the Department of Statistics and Computer Science for studies in facsimile techniques for on-line computer networks.

Mrs Lois Butler Charitable Trust

£3,200 for the School of Environmental Studies for the teaching of environmental subjects.

Cancer Research Campaign

(1) £10,157 and £1,754 and £272 for the Department of Anatomy and Embryology for work on the determination and differentiation of teratocarcinoma cells.

(2) £605 for the Department of Anatomy and Embryology for research on the permeability of inter-cellular junction in early embryos.

(3) £27,134 and £1,144 for the Department of Biochemistry for the development of a test system for carcinogens and research on biosynthesis and induction of Cytochrome P450 in rat liver.

(4) £5,987 and £302 for the Department of Botany and Microbiology for research on nucleic acid metabolism in mitochondria.

(5) £6,077 and £309 for the Department of Human Genetics and Biometry for research on mitotic cycle times and cell proliferation.

Central Water Planning Unit

£629 for research in the Department of Geology on saline intrusion into aquifers.

Centre for Environmental Studies

£1,000 for the School of Environmental Studies for a study in planning and absorption of newcomers in an Indian city.

Ciba-Geigy Plastics and Additives Company

£500 for the Department of Botany and Microbiology for investigations into the activity of dichlorobenzindine and other substances.

Commission of the European Communities

£11,525 for the Department of Botany and Microbiology for an investigation of the properties of the primary electron acceptor complex of Photosystem I.

Council for Educational Technology

£2,500 for the Department of Electronic and Electrical Engineering for the study of computer assisted learning in the Engineering Science Development project.

Department of the Environment

(1) £21,550 for the Department of Civil and Municipal Engineering for a study of the features of road accidents.

(2) £21,206 for research in the Department of Civil and Municipal Engineering on the effect of traffic volume and other factors on road user behaviour.

(3) £15,785 for research in the Department of Civil and Municipal Engineering on the effect of ageing on driver awareness of traffic hazards.

(4) £13,334 for the Department of Civil and Municipal Engineering for an analysis of road accident injuries.

(5) £3,200 for the Department of Civil and Municipal Engineering for a study of the physical processes associated with the entrainment and suspension of solids in turbulent velocity fields.

(6) £572 for the Department of Civil and Municipal Engineering for a study of major accidents in the building and civil engineering industry.

(7) £28,955 for the School of Environmental Studies for a study of market behaviour and substitution of outputs by construction firms.

(8) £10,000 for the School of Environmental Studies for research on the effectiveness of community information services in urban areas.

(9) £8,212 and £257 for the School of Environmental Studies for a study of employment in the construction industry.

(10) £15,338 for the Department of Geography for an analysis of ownership, price, and management of London's Green Belt land.

(11) £616 for the Department of Geography for the production of a model to predict ice formation on roads.

(12) £25,100 for the Department of Statistics and Computer Science for the development of computerised techniques for broad band route selection.

Department of Health and Social Security

(1) £25,502 for the Department of Mechanical Engineering for the development of an above-knee prosthesis.

(2) £4,000 per annum for the Department of Mechanical Engineering for the development of artificial limbs.

Department of Transport

£1,799 for the Department of Civil and Municipal Engineering for small scale stiffened panel (steel) tests.

European Space Agency

£4,566 for the Department of Physics and Astronomy in support of collaboration in the EXOSAT experiment development programme.

Federation of European Biochemical Societies

A donation of £6,000 per annum for three years in compensation for work undertaken in the College on behalf of FEBS.

The General Nursing Council for England and Wales

£500 for the Department of Psychology for the teaching of social skills.

Mr H. Grunwald

£30 per annum for seven years in continued support of the 'Eva Grunwald Memorial Prize', which was founded by Mr Grunwald in 1969, in memory of his wife, Eva Grunwald, a member of staff in the Department of French from 1946 to 1968.

Charles Henry Henshaw (The Late)

A bequest of about £10,000, divided equally between the Department of Zoology and Comparative Anatomy and the Department of Human Genetics and Biometry, for purposes related to the fields of zoology and biometry. [Mr Henshaw was a student in the Department of Zoology and Comparative Anatomy, 1931–34.]

Home Office

£1,922 for research in the Department of Psychology into standardised tests of literacy and numeracy.

Imperial Chemical Industries Limited

(1) £568 for research in the Department of Biochemistry on degranulation of endoplasmic reticulum as a short-term carcinogenecity test.

(2) £351 per annum for three years for the Department of Chemistry in support of the project on organocobalt complexes in the synthesis of cyclopropanes.

Mr Robert Le Rossignol (The Late)

(1) A bequest of about £35,000 for the Faculty of Medical Sciences for the establishment of a Fellowship Fund, to be known as the Emily Le Rossignol Fellowship Fund, for the encouragement of research into, or investigation of, some aspect of the arthritic condition. [Mr Le Rossignol was a student of Chemistry at the College in the early 1900s who did research with Sir William Ramsay.]

(2) A pendulum clock, which is being displayed in the University Observatory at Mill Hill (part of the Department of Physics and Astronomy).

(3) A gold medallion, which is being displayed in the College Library.

Leukaemia Research Fund

(1) £24,162 and £749 for research in the Department of Zoology and Comparative Anatomy on C-type virus proteins.

(2) £340 for the Department of Zoology and Comparative Anatomy for a radioimmunoassay for leukaemic antigens in man.

Leukaemia Society of America, Inc.

$2,000 in support of a research fellowship in the Department of Zoology and Comparative Anatomy.

The Leverhulme Trust Fund

(1) £18,300 for the School of Environmental Studies for the development of a training advisory service in the Development Planning Unit.

(2) £207 for the Department of History towards the cost of preparing a new edition of the Domesday Book.

London Transport Executive

£2,000 for the Department of Electronic and Electrical Engineering to conduct transponder studies and assessment trials.

The Longman Group

£6,500 per annum for seven years for the Department of English Language and Literature in support of the Longman Fellowship in English Language.

Joseph Lucas Ltd.

£3,000 for research work in the Department of Mechanical Engineering on the development of artificial arms.

Medical Research Council

(1) £108,553 for the Department of Anatomy and Embryology for an analysis of sensory signals in the central nervous system.

(2) £20,693 for research in the Department of Anatomy and Embryology on purinergic receptors.

(3) £18,653 for research in the Department of Anatomy and Embryology on the characterisation of transmitter receptor sites in isolated brain synaptic membranes.

(4) £18,186 for the Department of Anatomy and Embryology for the study of the differentiation of nerve and cells in tissue culture.

(5) £16,811 for research in the Department of Anatomy and Embryology on immunohistochemistry of brain synaptic junctional proteins.

(6) £16,542 for the Department of Anatomy and Embryology for the study of the structure and mechanical properties of developing smooth muscles.

(7) £12,331 for research in the Department of Anatomy and Embryology on the role of direct cell to cell communication during early development.

(8) £11,740 and £10,720 for the Department of Anatomy and Embryology for the study of the mechanisms for controlling the formation of neuromuscular connections.

(9) £11,030 and £300 for the Department of Anatomy and Embryology for the study of the properties of excitable cells during induction and early differentiation.

(10) £5,430 for research in the Department of Anatomy and Embryology on synaptic vesicle transport mechanisms and membrane relationships.

(11) £3,768 for the Department of Anatomy and Embryology for the study of the electrophysiology of muscarinic acetylcholine receptors.

(12) £900 for the Department of Anatomy and Embryology for combined ultrastructural and experimental studies on central and peripheral nervous tissues.

(13) £66 for the Department of Anatomy and Embryology for the study of synaptic organisation in sensory pathways of mammals and birds.

(14) £23,570 for the Department of Biochemistry for a study of the transcriptional control of ribosomal RNA synthesis.

(15) £20,299 for research in the Department of Biophysics on signal transmission and noise in red bipolar cells during light and dark adaptation.

(16) £18,994 for the Department of Chemistry for the study of the pharmacological properties of isolated guinea pig and other mast cells.

(17) £4,776 for the Department of Chemistry for the study of the three-dimensional structures of drugs and small biological molecules.

(18) £1,507 for the Department of Human Genetics and Biometry for a dermatoglyphic analysis of hand and foot prints of parents of mongols.

(19) £21,372 for research in the Department of Pharmacology on the role of anti-bodies in human anaphylaxis and respiratory allergy.

(20) £19,434 for research in the Department of Pharmacology on the role of histamine receptors in cell-mediated immune cytolysis.

(21) £49,886 for the Department of Phonetics and Linguistics in association with Guy's Hospital and the University of Cambridge for the study of speech pattern presentation by single channel extra-cochlear electrical stimulation.

(22) £26,001 and £423 for the Department of Physiology for the development of fast response apparatus for mechanical experiments on single muscle fibres.

(23) £21,593 for research in the Department of Physiology on the immediate energy supply for muscular contraction.

(24) £19,705 for the Department of Physiology for NMR studies of the energetics of muscular contraction.

(25) £175 for research in the Department of Physiology on the relation between mechanical and chemical events in muscular contraction.

(26) £27,144 for research in the Department of Zoology and Comparative Anatomy on the purification and characterisation of antigen specific thymus dependent lymphocytes and their factors.

(27) £8,266 for research in the Department of Zoology and Comparative Anatomy on immunology of the nervous system.

(28) Research training support grants totalling £16,500.

Ministry of Defence

(1) £2,444 and £2,508 for the Department of Civil and Municipal Engineering for the study of international design formulae for stress analysis of lightweight military vehicles.

(2) £11,750, £7,848 and £3,204 for the Department of Electronic and Electrical Engineering for the study of a high resolution array signal processing radar system.

(3) £4,925 and £2,690 for the Department of Electronic and Electrical Engineering for the study of hybrid modes in lossy coaxial cable.

(4) £3,200 for the Department of Electronic and Electrical Engineering for the study of direct optical modulation for data highway.

(5) £2,316 and £190 for the Department of Electronic and Electrical Engineering for research on integrated optical components for optical fibre data highways.

(6) £1,850 for the Department of Electronic and Electrical Engineering for the study of direct optical modulation for data highway.

(7) £1,162 and £38 for research in the Department of Electronic and Electrical Engineering on null steering antennas.

(8) £780 and £69 for research in the Department of Electronic and Electrical Engineering on stripline band branching filters.

(9) £16,533 for research in the Department of Mechanical Engineering on control systems for submersible vehicles.

(10) £7,257 and £3,000 for the Department of Mechanical Engineering for the study of fatigue crack growth.

(11) £4,980 for the Department of Mechanical Engineering for the Naval Architecture mid-career updating course.

(12) £7,943 for the Department of Phonetics and Linguistics for the study of listener identification of languages on the basis of prosodic features.

(13) £2,200 for the Department of Phonetics and Linguistics for research on perception of speech sound differences.

(14) £1,350 and £526 for the Department of Statistics and Computer Science for the study of software problems in computer networks.

Ministry of Education, Northern Ireland

Research training support grants totalling £75.

Ministry of Overseas Development

(1) £6,048 for research in the School of Environmental Studies on space utilisation.

(2) £820 for the School of Environmental Studies for the study of the role of secondary cities in East Africa.

The Moorgate Trust Fund

£500 for the Library for the cleaning and mending of the Hebrew Nuptial Poems in the Mocatta Library.

Muscular Dystrophy Group of Great Britain

£7,080 and £331 for the Department of Anatomy and Embryology for research on nerve muscle connections.

National Coal Board

£16,776 for the Department of Electronic and Electrical Engineering for the seismic exploration of coal seams.

National Fund for Research into Crippling Diseases

(1) £479 for research in the Department of Anatomy and Embryology on the immunological basis of response to sensory nerve myelin.

(2) £141 for research in the Department of Anatomy and Embryology on allergic neuritis and multiple sclerosis.

(3) £22,830 for research in the Department of Human Genetics and Biometry into the causes of anencephaly and spina bifida.

(4) £906 for the Department of Zoology and Comparative Anatomy for the study of mechanisms in diseases of the nervous system and muscle.

National Research Development Corporation

£18,299 for the Electronic and Electrical Engineering Department to improve the scanning acoustic microscope.

National Science Foundation, U.S.A.

$13,155 for the Department of Physiology for a programme related to post-doctoral energy.

The National Trust

£831.50 for the Department of Zoology and Comparative Anatomy for a survey of land for conservation.

Natural Environment Research Council

(1) £4,890 for the Department of Geology for a geological and geophysical investigation of the Sierra Leone Rise.

(2) £1,308 for the Department of Physics and Astronomy for the study of surface processes and crustal evolution on the terrestrial planets.

(3) Research training support grants totalling £4,650.

Nature Conservancy Council

(1) £5,473 for the Departments of Botany and Microbiology, Geography, and Zoology and Comparative Anatomy for reserve management planning for selected sites in South-West Scotland.

(2) £10 for the Departments of Botany and Microbiology, Geography, and Zoology and Comparative Anatomy for studies in Nature Reserve management.

North Atlantic Treaty Organisation

(1) B.Fr. 160,000 for the Department of Chemical and Biochemical Engineering for research on secondary nucleation in crystal suspensions.

(2) B.Fr. 120,000 for the Department of Chemistry for research on homolytic reactions involving small-ring compounds.

The Nuffield Foundation

£1,200 for the School of Environmental Studies for the study of regional planning in Greater London and its surrounding region from 1927.

Office of Naval Research, U.S.A.

Loan of Terminal Interface Message Processor, valued at $125,000 to the Department of Statistics and Computer Science for inter-continental computer networking.

Organisation for Economic Co-operation and Development

£1,150 for the School of Environmental Studies for the preparation of a paper on telecommunications and energy conservation.

The Paul Instrument Fund Committee

£6,400 for the Department of Chemistry for an investigation of transient gas-phase species.

The Post Office Contracts Division

£1,796 for the School of Environmental Studies for a study of the utility of an advanced telecommunications system.

The Royal Society

(1) £5,465 for the Department of Anatomy and Embryology for a study of the membrane properties of intercellular junctions in early amphibian embryos.

(2) £7,418 in support of a Royal Society Scientific Information Research Fellowship in the School of Library, Archive and Information Studies.

Science Research Council

(1) £15,640 for the Department of Biochemistry for the isolation of amidase regular gene protein from pseudomonas aeruginosa.

(2) £4,484 for the Department of Biochemistry for the study of amino acid substitutions of mutant amidases.

(3) £3,530 for the Department of Biophysics for a study of synaptic functions in the giant synapse of the squid.

(4) £36,038 for the Department of Botany and Microbiology for a study of the function of iron sulphur proteins and manganese in photo-synthetic electron transport.

(5) £4,389 for the Department of Botany and Microbiology for a study of the cytochemical and ultrastructural features of plant spermatogenesis.

(6) £925 for the Department of Chemical and Biochemical Engineering for particle temperature measurements in a fluidised bed combustor.

(7) £255 for the Department of Chemical and Biochemical Engineering for a study of the operation of an ethylene oxide reactor.

(8) £21,700 for research in the Department of Chemistry on the synthesis of large-ring conjugated systems.

(9) £15,300 for the Department of Chemistry for flash synchronized electron diffraction studies of transient gas phase species.

(10) £11,350 for research in the Department of Chemistry on haloes and fission products in Precambrian diamonds.

(11) £10,850 for research in the Department of Chemistry on *ipso*-attack in the nitration of aromatic amines.

(12) £10,300 for the Department of Chemistry for mechanistic studies of alkyl transfer reactions of organic transition metal compounds.

(13) £7,000 for the Department of Chemistry for an investigation into the behaviour of positive ions in the gas phase.

(14) £6,471 for the Department of Chemistry for resonance raman spectroscopy.

(15) £3,500 for the Department of Chemistry for neutron diffraction studies of disorder in rutile and corundum structured crystals.

(16) £2,869 for a senior visiting fellowship in the Department of Chemistry.

(17) £16,410 for the Department of Civil and Municipal Engineering for a study of the design implications of geometric imperfections in cooling towers.

(18) £15,935 for the Department of Civil and Municipal Engineering for research on fluidised bed flocculation.

(19) £12,500 for the Department of Civil and Municipal Engineering for a study of the representation and treatment of junctions and two-way roads in traffic assignments.

(20) £10,600 for the Department of Civil and Municipal Engineering for the study of buckling strength of continuous thin-walled beams.

(21) £6,893 for the Department of Civil and Municipal Engineering for the study of relationships between traffic patterns and signal timings in signal-controlled road networks.

(22) £23,655 for the Department of Electronic and Electrical Engineering for investigations of small stepping motors and drive systems.

(23) £12,601 for research in the Department of Electronic and Electrical Engineering on solid state micro-wave noise radar.

(24) £10,000 for the Department of Electronic and Electrical Engineering for the application of acoustic echo sounding techniques to radio wave propagation.

(25) £8,756 for research in the Department of Electronic and Electrical Engineering on solid state lasers in an optical fibre data highway.

(26) £430 for the Department of Electronic and Electrical Engineering for the study of open resonators for measurement of dielectric loss.

(27) £48,420 for research in the School of Environmental Studies on the morphology of building complexes.

(28) £12,220 for the School of Environmental Studies for a study of lighting levels for viewing works of graphic art.

(29) £23,700 and £250 for senior visiting fellowships in the Department of Mathematics.

(30) £10,050 for the Department of Mathematics for a study of boundary effects in non-linear stability.

(31) £5,317 for the Department of Mathematics for studies in subsonic turbulent separated flow.

(32) £132,000 for the Department of Mechanical Engineering and the Department of Civil and Municipal Engineering for research projects relating to marine structures and materials.

(33) £28,700 for research in the Department of Mechanical Engineering on fatigue crack growth.

(34) £415,000 for the Department of Physics and Astronomy for geophysical and astronomical research in Space.

(35) £99,714 for the Department of Physics and Astronomy for the design and assessment of a CLIP-4 Array Processor.

(36) £82,140 and £7,150 for the Department of Physics and Astronomy for automatic measuring equipment.

(37) £72,181 for the Department of Physics and Astronomy for the Bubble Chamber film analysis for 1977–78.

(38) £62,305 and £1,040 for the Department of Physics and Astronomy for a balloon programme of infra-red astronomy.

(39) £45,149 for research in the Department of Physics and Astronomy on atmospheric structure and dynamics.

(40) £35,917 for the Department of Physics and Astronomy for the further development of the image photon counting system for optical astronomy.

(41) £22,788 for the Department of Physics and Astronomy for the study of parallel processing networks.

(42) £21,439 and £13,982 and £476 for the Department of Physics and Astronomy in support of participation in the IUE Project.

(43) £17,120 for the Department of Physics and Astronomy for spectroscopic studies of the interstellar medium.

(44) £15,000 approx. for the Department of Physics and Astronomy for the supply of a scanning table for exploitation of the Big European Bubble Chamber.

(45) £14,658 for the Department of Physics and Astronomy, under an agreement with the Rutherford High Energy Laboratory, for a search for short-lived particles produced in neutrine interactions.

(46) £13,050 for the Department of Physics and Astronomy for the calculation of atomic data required for astrophysics.

(47) £12,153 for the Department of Physics and Astronomy for the study of the interaction of hadrons, nuclei and quarks.

(48) £11,181 for the Department of Physics and Astronomy for extragalactic observations.

(49) £10,780 for the Department of Physics and Astronomy for research on atomic photo ionization cross-sections and radiative transition probabilities.

(50) £9,491 for the Department of Physics and Astronomy for the calculation of low-energy electron-molecule scattering cross-sections.

(51) £7,304 for the Department of Physics and Astronomy for infra-red spectroscopy of astronomical objects from Mount Wilson.

(52) £7,000 and £1,272 and £1,228 for the Department of Physics and Astronomy for observations at AAO.

(53) £7,333 for the Department of Physics and Astronomy for a collaborative programme of high resolution ultra-violet astronomy.

(54) £6,866 for the Department of Physics and Astronomy for the Electrodynamic Explorer Mission Study.

(55) £4,900 for the Department of Physics and Astronomy for the study of interstellar spectra.

(56) £3,271 for a senior visiting fellowship in the Department of Physics and Astronomy.

(57) £2,600 for the Department of Physics and Astronomy for speckle interferometry on the AAT.

(58) £2,597 for research in the Department of Physics and Astronomy on ground-based astronomy from Tenerife.

(59) £2,467 and £1,598 for the Department of Physics and Astronomy for the construction of a liquid helium cooled grating spectrometer.

(60) £2,292 for the Department of Physics and Astronomy for observations using the UCL photon counting system.

(61) £2,125 for the Department of Physics and Astronomy for the development of new techniques for the calculation of atomic radiative transition probabilities.

(62) £1,536 for the Department of Physics and Astronomy for the study of the stellar wind of the WC8 component of Y2 Velorum.

(63) £1,090 for the Department of Physics and Astronomy for observations at AAT.

(64) £857 for the Department of Physics and Astronomy for photoelectric photometry of ultra-violet objects.

(65) £760 for the Department of Physics and Astronomy for the study of optical counterparts of x-ray stars.

(66) £652 for the Department of Physics and Astronomy for observations at SAAO.

(67) £522 for the Department of Physics and Astronomy for optical studies of ultra-violet objects.

(68) £330 and £44 for the Department of Physics and Astronomy for infra-red spectroscopy and photometry of Southern planetary nebulae.

(69) £220 for the Department of Physics and Astronomy for a study of coronal emission lines from supernova remnants in the large magellanic cloud.

(70) £175 for the Department of Physics and Astronomy for the study of coupling between the ionosphere and magnetosphere at high latitudes.

(71) £101 for the Department of Physics and Astronomy for observations at RGO.

(72) £26,539 for the Department of Statistics and Computer Science for the investigation of software and operational requirements for computer networks.

(73) £17,750 for the Department of Statistics and Computer Science for the development of computer packages for statistical analyses of the linear model.

(74) £4,631 for the Department of Statistics and Computer Science for the provision of advisory and documentation services to university users of the ARPA network.

(75) Research training support grants totalling £37,500.

Social Science Research Council

(1) £14,406 for the Department of Anthropology for an ethnographic study of the Dowayo in the Northern Cameroon.

(2) £10,000 for the Department of Anthropology for the study of structures of behaviour.

(3) £9,911 for the Department of Anthropology to study the material culture of the Lgemba Region, Bermuda Plateau, Cameroon.

(4) £87 to meet costs of subsistence of an exchange lecturer in the Department of Anthropology.

(5) £70 for the Department of Anthropology for the study of social structure and agricultural productivity in Negeri Sembilan, Malaysia.

(6) £3,955 for the Department of Civil and Municipal Engineering for the study of the Smeed Approach to urban transport planning, with special reference to hand use and trip length.

(7) £252 for the Department of English Language and Literature for the study of the formal and semantic properties of questions in spoken English.

(8) £10,672 for the School of Environmental Studies for studies in the use of telecommunications for geographically dispersed higher education.

(9) £1,120 for the School of Environmental Studies for a study of the careers of ex-students of architecture.

(10) £5,980 for the Department of Geography for a projection of non-renewable mineral demands in Western Europe.

(11) £1,350 for the Department of Geography for a study of algorithms for spatial data.

(12) £700 for the Department of Geography for the study of the impact of local leaders on squatter settlement development in Mexico City.

(13) £12.50 for the Department of Geography for the compilation of a bibliographic guide to the Tithe Surveys of the mid-19th Century.

(14) £866 for the Department of History for a study of the economic context and consequences of Spanish-Dutch conflict and rapprochement between 1618 and 1668.

(15) £824 for the School of Library, Archive and Information Studies for the preparation of a calendar and handlist of recent additions to the archives of Karl Pearson.

(16) £5,906 for the Department of Phonetics and Linguistics for a study of variation in London English.

(17) £75 for the Department of Political Economy for travel expenses incurred by participants in the Franco-British Seminar on Political Economy, held in Paris.

(18) £1,638 for the Department of Psychology for the study of the discrimination problems of readers.

(19) £685.20 for the Department of Statistics and Computer Science to study the Biometric School and its influence on the social sciences.

(20) £900 for research in the Department of Statistics and Computer Science on applied decision analysis.

(21) Research training support grants totalling £615.

[The grant to the School of Environmental Studies reported under item (4) in the Annual Report for 1975–76, page 150, was reduced from £12,475 to £11,516.]

Stanford Research Institute

£220 for the School of Environmental Studies for the assessment of impacts of the use of telecommunications as a substitute for travel.

Stiftung Volkswagenwerk

DM 31,200 for research in the Department of Human Genetics and Biometry on stages of cell differentiation in spinal and muscular development of the chicken embryo.

Mr C. A. R. Tayler

A gift of £250 to establish a prize to be awarded annually to a student in the Department of Physics and Astronomy. [Mr C. A. R. Tayler, an employee of the College from 1925–75, was Laboratory Superintendent in the Department of Physics and Astronomy from 1967 until his retirement in 1975.]

United Kingdom Atomic Energy Authority

(1) £3,800 for research in the Department of Chemical and Biochemical Engineering on macromolecular separations.

(2) £10,200 for the Department of Physics and Astronomy for the study of electron impact ionization from metastatic states.

(3) £3,159 and £2,902.50 for the Department of Statistics and Computer Science as a contribution towards the cost of the data link between University College London and Norway.

(4) £2,350 for the Department of Statistics and Computer Science for ARPA Network software.

The United States Air Force

(1) $13,451 for research in the Department of Electronic and Electrical Engineering on scanned active array radar.

(2) $6,800 for the Department of Physics and Astronomy for tidal investigations into the troposphere and stratosphere.

United States Public Health Service

(1) $16,102 and $15,503 for research in the Department of Anatomy and Embryology on ineffective synapses respiration.

(2) $26,715 for research in the Department of Chemistry on the conformations of cholinergic molecules.

(3) $24,032 for research in the Department of Chemistry on the conformations of psychoactive substances.

The University of London—Interim Library Resources Co-ordinating Committee

(1) A grant of £10,000 to the Library from the Central Book Fund for the purchase of modern art and Scandinavian Studies material.

(2) A grant of £3,400 to the Library from the Central Book Fund for the purchase of human ecology material.

(3) A grant of £92 to the Library from the Central Book Fund for the purchase of archaeological books.

The Viking Society for Northern Research

The Society has established a Viking Society Prize to mark its long association with the College, and in particular the thirty years' tenure of the Honorary Secretaryship, jointly with Gabriel Turville-Petre, of Hugh Smith and Peter Foote, in succession. The Prize is awarded annually to an undergraduate student in the third or fourth year following courses in the Department of Scandinavian Studies whose work in branches of study appropriate to the Society's interests in Northern Research shows particular merit. It takes the form of membership of the Society for a period of five years, a cheque for £15 (or such sum as the Society may decide), and a selection of the Society's publications.

Water Research Centre

£9,484 and £452 for the Department of Civil and Municipal Engineering for the development of a new flocculation test method.

The Wellcome Trust

(1) £5,954 and £226 for the Department of Anatomy and Embryology for an investigation of the process of synaptic transmission.

(2) £1,998 and £1,500 for the Department of Anatomy and Embryology for the study of purinergic nerves.

(3) £1,930 for the Department of Anatomy and Embryology for study of the innervation of blood vessels, and of purinergic nerves.

(4) £1,500 and £462 for the Department of Anatomy and Embryology for the study of the sympathetic innervation of blood vessels in mammals, including humans.

(5) £1,229 and £472 for the Department of Anatomy and Embryology for the study of the hippocampal function.

(6) £931 for the Department of Anatomy and Embryology for the study of neurology and the history of neurology.

(7) £5,441 for the Department of Biophysics for the study of factors involved in the formulation of synapses between nerve and muscle.

(8) £298 for the Department of Biophysics for the study of the time course of action of digitalis glycosides and related compounds.

(9) £250 for the Department of Biophysics for the measurement of changes in redox couples in the hypertrophied rat diaphragm.

(10) £604 and £464 for the Department of Chemistry for the study of nerve growth factors and their anti-serum.

(11) £3,421 and £129 for the Department of Human Genetics and Biometry for the study of human alcohol dehydrogenase.

(12) £2,106 for the Department of Physiology for a study in developmental neurobiology.

(13) £1,859 for the Department of Physiology for research on the regulation of collagen metabolism in the rat uterus.

(14) £13,836 and £430 for research in the Department of Zoology and Comparative Anatomy on immunity to the herpes simplex virus.

(15) £366 for the Department of Zoology and Comparative Anatomy in support of a study of the immuno-chemistry of murine cell surface alloantigen, Tyi-I.

Xerox Research (UK) Limited

(1) £3,000 for the Department of Electronic and Electrical Engineering for an investigation of optical wave-guiding materials and process technology.

(2) £3,000 for the Department of Electronic and Electrical Engineering for research on integrated non-linear optical devices.

GIFTS TO THE LIBRARY

Professor P. R. Banham

36 volumes on architecture.

Mr Nicolas Barker

W. P. Ker manuscripts and notebooks from the papers of his mother, Lady Barker.

Mr David Garnett

Manuscript notebooks of Arthur Black, a student of W. K. Clifford.

Mr Alex Helm

84 volumes of manuscript notebooks on costumes for English folk dances, which were bequeathed to the Folk Lore Society in 1970 and transferred to the Library in 1975.

Paddington School

38 volumes in the field of classical studies.

Mr G. L. Proctor

63 volumes of Scandinavian literature.

Mrs M. Rodgers

A bequest of 176 volumes of Scandinavian literature.

Sir John Rothenstein

A collection of museum catalogues and guides.

Mr Edward Sarmiento

Letters of the poet Manuel Altolaguirre.

Dr Ann Saunders

Books, correspondence and papers of Sir George Dancer Thane.

Dr W. A. Smeaton

25 rare books on the history of science.

APPENDIX VII

COLLEGE ACCOUNTS 1976–77

The Balance Sheet and the Income and Expenditure Account for the year will be found on pages 139–141.

BALANCE SHEET

LIABILITIES

The Capital Account reflects a decrease of £50,189 largely relating to the Whitcher Place (Kentish Town) sale.

ASSETS

Freehold and Leasehold Land and Buildings decreased by £49,360 reflecting sales and acquisitions of the Whitcher Place (Kentish Town) properties.

TRUST FUNDS

The College holds endowments in the form of 224 separate trust funds with a total value of £2,012,185. The funds yielded a total income of £209,000.

INCOME AND EXPENDITURE

The income for the year exceeded expenditure by £72,056. The balance carried forward on the Income and Expenditure Account was £442,581 (£370,525 in 1975–76).

Income exceeded that for 1975–76 by £1,866,567. Grants from the Court of the University increased by £1,273,083. Fees increased by £260,236 and grants for research increased by £176,198.

Expenditure, including allocations to and from Reserves, was £1,912,567 more than in 1975–76. An additional £1,293,696 net was spent on academic departments and services. Maintenance of premises cost an additional £428,359 net. An additional £129,124 net was spent on administration, and miscellaneous expenditure increased by £61,388 net.

Income and expenditure under the main classifications in 1976–77 as compared with 1975–76 and with the corresponding year of the previous quinquennium, are shown in the following table.

EXPENDITURE	1971–72 £	%	1975–76 £	%	1976–77 £	%
Salaries and Pensions of Teaching Staff	3,055,868	34·5	5,657,049	33·8	6,247,666	33·5
Departmental Expenses, including Library	2,039,714	23·1	3,777,954	22·6	4,304,835	23·1
Research Grants ..	1,686,040	19·1	2,955,854	17·6	3,132,052	16·8
Maintenance of Premises ..	1,166,884	13·2	2,603,741	15·6	3,032,100	16·2
Administration ..	551,275	6·2	1,145,850	6·8	1,274,974	6·8
Selective Employment Tax	135,638	1·5	—	—	—	—
Other	213,326	2·4	605,846	3·6	667,234	3·6
	£8,848,745	100·0	£16,746,294	100·0	£18,658,861	100·0

INCOME						
Endowments ..	99,917	1·1	152,330	0·9	184,990	1·0
Grants	6,253,298	69·9	12,385,146	73·4	13,658,229	72·9
Donations	202,992	2·3	290,978	1·7	364,971	2·0
Fees	450,578	5·0	852,966	5·1	1,113,202	5·9
Grants for Research	1,686,040	18·9	2,955,854	17·5	3,132,052	16·7
Research Training Support Grants ..	44,763	0·5	58,885	0·4	58,440	0·3
Selective Employment Tax	135,638	1·5	—	—	—	—
Other	69,831	0·8	168,191	1·0	219,033	1·2
	£8,943,057	100·0	£16,864,350	100·0	£18,730,917	100·0

EXTRA-BUDGETARY ACTIVITIES

The College administers the finances of many research projects supported from outside sources. 525 were being pursued actively at 31 July 1977. Income and expenditure increased from £2,955,854 in 1975–76 to £3,132,052 in 1976–77.

UNIVERSITY COLLEGE LONDON

BALANCE SHEET 31 JULY 1977

31.7.76 £		£
16,294,139	CAPITAL ACCOUNT	16,243,950
35,973	REDEMPTION FUND	37,918
4,973	LOAN	3,028
16,335,085		16,284,896
2,958,644	RESERVES AND AMOUNTS SET ASIDE	3,723,690
758,269	EARMARKED FUNDS	1,211,630
1,040,506	CURRENT LIABILITIES	1,267,458
21,092,504		22,487,674
1,804,748	TRUST FUNDS	2,012,185
£22,897,252		£24,499,859

31.7.76 £		£
16,119,446	FREEHOLD LAND AND BUILDINGS—See Note below	16,070,086
372,875	LEASEHOLD LAND AND BUILDINGS	369,209
16,492,321		16,439,295
—	CAPITAL WORKS IN PROGRESS	25,757
1,138,701	INVESTMENTS at Lower of Cost and Market Value .. (*Market Value at 31 July 1977: £2,305,136; 31 July 1976: £1,138,701*)	2,305,136
1,591,699	EXPENDITURE RECOVERABLE FROM GRANTS ..	1,202,974
1,869,783	CURRENT ASSETS	2,514,512
21,092,504		22,487,674
1,804,748	TRUST FUNDS	2,012,185
£22,897,252		£24,499,859

NOTE

Freehold and Leasehold Land and Buildings

(*a*) Freehold and Leasehold land and buildings in the accounts do not include fixtures, furniture and equipment. The cost of these assets is written out of the accounts on purchase or on completion of a Project against the corresponding grants or other monies received and are not therefore included in Capital Account.

(*b*) Freehold land and buildings are stated at a valuation made in 1959 on the basis of the then current land values and building costs with subsequent additions at cost or valuation, as estimated by the College authorities on a basis which excludes professional fees.

(*c*) There are commitments for future expenditure on capital projects which amount to £937,000 at 31 July 1977 (*1976 £126,000*).

EXPENDITURE

1975–76 £		1976–77 £	£
	Administration		
876,746	Salaries	968,970	
210,680	Advertising, Printing, Stationery, Postage and Telephone	232,995	
58,424	Other Expenses (including Professional Fees)	73,009	
(1,145,850)			1,274,974
	Academic Departments		
5,488,074	Salaries of Teaching Staff	6,031,044	
1,643,458	Departmental Wages: Technical Staff	1,774,602	
556,847	Secretarial Staff	624,745	
966,141	Departmental and Laboratory Maintenance	1,120,296	
2,955,854	Research Expenditure covered by grants on Research Contracts (contra opposite)	3,132,052	
15,123	Other Expenditure	17,372	
(11,625,497)			12,700,111
	Academic Services		
300,271	Libraries: Salaries .. 329,370		
232,708	General Expenditure 223,147		
		552,517	
13,626	Central Photographic Service	15,884	
17,529	Audio Visual Aids	19,482	
12,233	Radiation Hazards	13,442	
175	Small Group Teaching	—	
(576,542)			601,325
	Maintenance of Premises		
617,053	Rates	646,012	
38,733	Insurance	57,136	
	Rents and other payments for use of buildings:		
26,640	Student Accommodation .. 33,502		
45,738	Other Buildings .. 48,388		
		81,890	
363,252	Heat, Light, Water and Power	436,112	
1,296,019	Repairs and Maintenance of Buildings including amounts set aside for long-term maintenance	1,401,020	
228,465	Wages of Porters and Attendants	249,204	
27,358	Other Expenses	33,750	
(2,643,258)			2,905,124
	General Educational		
2,296	Examinations	14,230	
46,162	Scholarships and Prizes	38,365	
12,301	Public Lectures	12,734	
11,500	Staff Attendance at Conferences	14,000	
50,508	Student Vacation Grants	38,309	
10,773	Miscellaneous	735	
(133,540)			118,373

INCOME

1975–76 £		£	1976–77 £
	Endowments		
152,330	Income of Trust Funds appropriated for purposes specified by Trusts against expenditure included opposite		184,990
	Donations and Subscriptions (including Ministry of Overseas Development £87,815—1975–76 £77,000): Appropriated for:		
7,781	Libraries	9,488	
19,852	Scholarships and Bursaries	11,837	
188,352	Salaries and Superannuation	202,820	
74,993	Departmental and Laboratory Maintenance	140,826	
(290,978)			364,971
	Grants from University Court		
10,404,000	General	11,881,000	
69,000	Supplementary	718,000	
(10,473,000)			12,599,000
	Earmarked:		
46,803	Minor Building Projects	39,579	
952,593	Academic Salary Revision 1975 Scheme	—	
7,676	Clinical Salary Revision	350	
49,249	Academic London Allowance	—	
31,876	U.S.S. 2% Surcharge	55,523	
3,640	Fees Waiver	9,233	
617,053	Rates	646,012	
—	Small Grants—Humanities	396	
3,189	Hayter Committee	4,277	
5,762	Parry	8,794	
—	Supplementary Maintenance	36,500	
	University College/Royal Free Medical		
7,500	Project—Administration	7,500	
20,466	M.Sc. Course in Ergonomics	24,883	
100,497	Former Institute of Computer Science	116,049	
2,777	Intercollegiate Service Facilities	6,483	
63,065	Pension Increase Order 1974, 1975, 1976	103,650	
(1,912,146)			1,059,229
58,885	**Research Council Training Support Grants**		58,440
852,966	**Fees**		1,113,202
2,955,854	**Grants for Research**, including research contracts (contra opposite)		3,132,052
77,699	**Contributions for Services Rendered**		71,003
15,196	**College Properties**—Rents received		13,049
	Other Items		
	Special Funds Appropriation:		
8,801	Earmarked Funds	5,973	
1,480	Other	966	
			6,939

100,614	Grant to Students Union	96,787	
21,147	Collegiate Theatre and Shenley	79,833	
4,205	Salaries: Wardens of Halls of Residence	4,301	
49,357	Student Health Service	53,898	
2,741	Students' Purposes Fund	2,592	
640	Crabb Robinson and Ealing Hall Funds	744	
11,828	Central Admissions Scheme	12,828	
6,919	Miscellaneous	4,236	
6,128	Careers Office	7,427	
7,982	Student Counsellor Service	11,021	
(211,561)			273,667
	MISCELLANEOUS		
168,975	Staff Pensions	216,622	
2,676	Grants from Benevolent Funds	3,446	
3,244	Interest on Overdrafts, etc	1,207	
33,558	Sundries	28,523	
—	150th Anniversary	10,000	
6,300	College Collection	5,500	
50,200	Refectory: Deficit met by College	11,403	
(264,953)			276,701
673	Transfer to Equipment and Furniture		121,463
	CAPITAL EXPENDITURE MET FROM INCOME:		
48,076	Minor Building Projects	41,669	
74,801	Other	138,219	
			179,888
16,724,751			18,451,626
	ALLOCATION TO RESERVES AT 31 JULY 1977		
	Revenue Grants:		
10,000	Administrative Staff Training	10,000	
	Departmental and Laboratory		
294,862	Maintenance	414,237	
6,691	Academic Services	53,811	
49,949	Repairs and Maintenance of Building	187,534	
129,796	Minor Works	22 868	
4,155	Student Vacation Grants	15,846	
5,587	Miscellaneous	6,069	
	Development Programme:		
41,694	Relocation and Other Costs	41,694	
(542,734)			752,059
(4,161)	Minor Building Projects		(6,251)
2,938	Small Group Teaching		2,938
17,266,262			19,200,372
118,056	EXCESS OF INCOME OVER EXPENDITURE FOR THE YEAR		72,056
£17,384,318			£19,272,428
	Balance 31 July 1977 Carried to Reserve:		
186,700	Committed		231,740
183,825	Unappropriated		210,841
(£370,525)			£442,581

—	*Less:* Transfer to College Fund	52,274	
			95,099
15,473	Miscellaneous		32,943
(75,296)			134,981
	ALLOCATION FROM RESERVES AT 1 AUGUST 1976		
	Revenue Grants:		
10,000	Administrative Staff Training	10,000	
	Departmental and Laboratory		
250,465	Maintenance	294 862	
31,070	Academic Services	6,691	
94,855	Repairs and Maintenance	49,949	
72,928	Minor Works	129,796	
8,063	Student Vacation Grants	4,155	
7,780	Miscellaneous	5,587	
	Development Programme:		
41,694	Relocation and Other Costs	41,694	
(516,855)	Balance at 1 August 1976		542,734
—	Minor Building Projects		(4,161)
3,113	Small Group Teaching		2,938
17,384,318			19,272,428
252,469	Balance as at 1 August 1976		370,525
118,056	Excess of Income over Expenditure for the Year after making allocations (net) from Reserves of £207,235		72,056
£370,525			£442,581

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